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PHILOSOPHY: A STUDY IN ADJUSTMENT.

AS the world's knowledge increases in quantity and diversity, it reaches saturation points—summits of traction, when the friction of old ideas and new becomes so great that unless there is some kind of adjustment, there will be social explosion and consequent loss of power. The call is then for the linking together in systematic fashion of developments, facts, and systems which have divergently appeared as the result of special endeavor and individualized efforts; the adjustment is complete only when smoothness of unified functioning is restored. The heterogeneous contributions have to be mixed together, poured again, and allowed to set as a unified foundation for the structure which is to come. Such periods have been repeatedly reached in human history, and as repeatedly have been followed, among the most advanced peoples, by a restoration of first principles derived anew from the data achieved and containing the germ of future advance. "Thus Hegel," says Ruggiero,[1] "who compared philosophy to the owl of Minerva which spreads its wings at dusk—when a historical

[1] *Modern Philosophy* (trans. Hannay and Collingwood, New York: Macmillan, 1921), p. 16.

movement is concluded—really heralded with his own philosophy the dawn of the whole historical development of the nineteenth century." The result may be torsion or a forward impetus, according to whether or not the principles arrived at are sound. The French Revolution, the rise of the German Empire, the present condition of Russia are instances in point. It has been the perennial task of the philosopher to perform this service to mankind; his it is to be forever vigilant, and by his larger view to prevent the emotional emergents of particular conditions from passing into a world-view or an absolutely ultimate constituent of knowledge or reality.

Philosophers, constructing their thought on the data which their age supplies, have always to work their way through a mass of material, ever increasing, ever changing, now pointing in one direction, now in another. It is their common experience to find opposing lines of thought, each followed by its coterie of disputants, and each offering a new break with tradition. The consequence is that the philosophic mind finds itself in the midst of confusion: the greater the knowledge of the age, the greater the confusion. But the outcome of philosophic synthesis has always been beneficial.

When the culminating point of strife is reached, the issues become finer drawn and the field narrowed; this is the opportunity of the philosopher, who then steps in, grasps the whole as presented, fixates the elements which have emerged, and sets the order for a new and greater advance. Thus we have Aristotle, Augustine, Descartes, Kant and Mercier. A new increment to philosophy consists in giving perfect expression in ultimate terms (however mixed with individual aberrations) to the accumulated knowledge and experience of a period; it then follows that the mind turns to new fields or the exploration of the old by new methods, and we pass through a different scale of experiences. The existing generation is furnished with a new thought-content, generated by the politics,

education, discoveries, mechanisms, social and religious experiences which occur; its own life is a source of wonder to each generation, as it is to each man. This fresh content diverges from or includes a reaction against the traditions of the age immediately preceding: the belief arises that a new philosophy, a new set of ultimate principles, needs to be attained; and certainly an intelligible philosophy has to be constructed or reconstructed out of the language, pursuits and tendencies of the times.

The effort to do this without loss keeps philosophy alive and gives it perennial interest. There are old errors and old truths; our progress is made up more of fresh revelations from new points of view than of new objects of thought. This is especially true in physical science. Thus, chemistry made great strides under the theory of the individual atom; it is progressing further by the modern investigation of atomic structure. All possible errors have not yet been made, but a speculative excursion into the camp of possible error can be pretty well matched by a history of errors which have been taught. Very often a real achievement has caused the worker to depart on a track which accurate thought would have avoided. There is so much of feeling, wish and fear in the individual that a genuine attainment is clouded by an overweening ambition to make it all-reaching. Demonstration is deserted for belief: the very finality of belief is its excuse for acquiescence.[2] This belief is not Faith: but the cessation of all expectancy, the absence of the wonder which is the source of all philosophic inquiry. The satisfied possession of a part doing duty for the whole leaves an uninvestigated void which is attacked by new thinkers unwilling to rest in mere belief. This fact is recognized by Paulsen[3] who regards philosophy as "a continually repeated

[2] Cf. William McDougall, *Psychological Review*, XXVIII (1921), 318: "Belief is a terminus ad quem, rather than a driving power."

[3] *Introduction to Philosophy* (trans. Thilly, 2nd American Edition, 1904), pp. 5-6.

effort to arrive at a comprehensive and systematic knowledge of the form and connection, the meaning and import of all things—and therefore an effort of will, a struggle of the individual against the collective mind for freedom." And, "according to Aristotle, it is wonder, according to Descartes, doubt, which is the beginning of philosophy. Both statements mean the same thing, namely, the awakening of individual thought which has hitherto been silenced or lulled to sleep by universal opinions."

That another element besides individualistic effort and expression as opposed to the inactivity of rest in mere general opinion enters into the development of new philosophy may be judged from certain phases of psychology. In an article on "The Law of Habitation" Stephen C. Pepper,[4] treating especially the aesthetic field, speaks of a cyclic phase in affective sequence. "It is," he says, "as if there were only a certain limited capacity of appreciation, as there is only a limited capacity of attention." "In short, as a result of frequent stimulation the elements of an affective sequence are first drawn from dislike to liking; and then in case the elements are too complex to be absorbed into a rather intense and indiscriminate liking, the affective sequence acquires a new movement, a pendulum swing from extreme to extreme of the sequence through a point of intense liking. This mutation in both of its phases is a matter of months, years, and even sometimes of centuries." Devising a philosophy carries a pleasure to the orectic of reason which also wearies of sameness; it is as if there existed a margin of fatigue for the "thought of the race as in the physical effort of the individual." "After the flower the fruit: no plant flowers forever and the year round."[5]

The combination of these motives produces in the mind an

[4] *Psychological Review*, XXVIII (1921), 70.

[5] Bernard Bosanquet, *A History of Aesthetic* (London: George Allen and Unwin, 1922), p. 163.

urge towards a new adjustment. All philosophy seeks to give an answer to the great questions which every man, learned or unlearned, by the first impulse of grand curiosity, is moved to ask. It seeks to express in terms of the ultimate the origin, destinies, reasons and causes of all that is known to be, or can be supposed to be. It follows the mind where experiment cannot follow, into the regions of the universal and the infinite; it raises the question and clings to its power of pursuit until the answer is found. There is no escape from the facts of existence and of consciousness. The unitive self, the ultimate of introspection, the final existent of reflective consciousness, the center, core or basis of feeling, is the subjective correlate, and therefore the evidenee of the received or projected or ultimately objective universe.

The advance is made by mind following the operative processes of which it is capable. It is true that some facts, or things that matter will do, ways in which it will act, have been stumbled upon by chance. Sometimes, as when Columbus sought the Indies, the careful observer in search of one thing will find another. Even in such cases the recognition of value is due to the forward-looking capacity of mind. The step from the fall of the apple to the generalization of the law of gravity was an extension inexplicable in any way other than by the power of mind to search and grasp the ultra-empirical. The ability constantly used in modern science to lay out a problem, as a man would stake a claim, and seek the solution, like a prospector hunting gold, is evidence of the capacity and inclination to delve into futures, ask questions, and as a result of mental foresight, add to the possessed stock of information. In some cases, the mind proposes an experiment whose outcome, because of the limitation of our knowledge, is largely unpredictable. In others, the outcome is as certainly foreseen as the coming of an eclipse or the rising of the tides. The problem is always one of causes; discover that which is here and now

at work, and you are able to formulate the law. The possibilities of matter, its limitations and the quality of power which it possesses must be determined by experience. Mind, however, can propose infinity as the term of its quest.

In regard to some questions, the struggle in adjustment revolves around experience; to others, sense-received data can never give a completely positive response. These are the "ultimates", beyond which there is no further search. As the slightest local motion passes over an infinity of potential divisions, so the mind leaps from the stopping point of sensation, howsoever aided by microscope, telescope, or other means, over the gap between this point and the final goal. Ample scope is thus left for the accumulation of inexhaustible information and its classification into the fields of special science, resting always on the basis of First Cause and unshakable substance. This is the true notion of "metaphysics": which is nothing other than the exercise of intelligence in that transcendent degree which is most natural and most simple. That these ultimates are represented in the psychic knowledge-power in the same positive manner (by images of themselves caused directly by themselves, and not produced by the labor of the mind) no one would assert. But the right of the mind to put its own capacity to work, and move along lines of the irresistible thought channel which we call "logic" is something which it cannot give up, even if it would. The weakness of every partial, unfree philosophy lies in the inhibitions which are placed upon this liberty of mind, and the resulting check upon the advance of thought. The negation of ultimates posits an ultimate short of that to which thought can attain. The moral purpose of mental action is thereby removed; conclusions are accepted which, if rationally obeyed, would render quiescent all pursuit, and throw science into stagnation. A philosophy which takes the initial impulse away from the individual takes all hope out of the struggle for adjustment.

In the last analysis, mind, not matter, accounts for every new synthesis of facts and every achievement of science. The paradox of sound metaphysics lies in this, that the further the mind gets from reality the closer it gets to it: the greatest truths avoid the pragmatist's test.[6] In the splendid sweep, like the parabola of a comet, along a path which there is no retracing, understanding clasps the universe: the whole paraphernalia of physicist and psychologist, atoms, neurones, emotions, instincts, are pushed aside in the attainment of simple being. Only life can feel want, only mind can inquire. Matter acts on what is tangential; mind is unbounded and engages in the limitless pursuit of the supersensible. Its deeper hunger is not satisfied with the passing tastes of sense, but wants a more substantial flavor. Neither increase of knowledge concerning the forces in the universe, nor detailed study of the body of man, or of his history and descent, nor the variations in the knowledge and experience from which each generation reasons, can affect or alter the universal principles from which they flow.

It is one thing to receive knowledge by an operation of the object known on the subject who then knows; and another by a creative advance to move mentally into the field of those objects from which no direct stimulus is received. In the case of these latter, common understanding knows a difference between those which are purely its own creation and those to which it does not directly reach. The knowledge of a cause is attained by the action of the effect upon the knower. Mind finds itself aware of something, in possession of an idea, and by its progressive power, its capacity for composition and division, it separates this idea into its reality, the reason for its presence in the mind, and the reason for its existence at all. The

[6] Drake, *Mind and Its Place in Nature* (New York: Macmillan, 1925), p. 183: "Not only intelligence, but all consciousness, is in a sense creative."

assignment of these elements to their place in the universal scheme of things is the power and right of mind. It finds however that it is not wholly self-sufficient. For certain results it is dependent upon agencies outside its own control. It cannot trace to itself the beginning of its own activity, nor exercise this activity in arbitrary fashion. It is held to definite conditions and definite procedures. It asserts its right to predicate reality only in so far as these conditions and these procedures are observed. The study of these conditions which tell us how knowledge is formed leads to the field of psychology, the study of these procedures: how the mind may legitimately advance upon the basis of what is has received and by which it is perfected in its equipment for progress constitutes logic. Hence in a certain sense, the most profound of all empirical sciences is made up of the tests which the mind can apply to itself; the most striking of all experiments is to observe whether or not the mind can act, relinquishing the trammels of logic, the cylinders and pistons of its power, and be guided by the broken steering gear of fallacies.

Perhaps the greatest difficulty in adjustment, the limitation which is most trying to the modern practical mind (the despair of the pragmatist), is the impossibility of arriving at direct sense perception of ultimates in any line. This has so confused some that they class these ultimates as wholly unknown. They are unknown only in so far as they do not subject themselves to visibility under the action of sensible forces. We cannot, for example, take a thing which is not and observe whether it can become out of nothing. We cannot normally exact a visible reaction from the First Cause. We cannot reverse the order of events. Even if we could catch up with the wave sent off by the flash of the helmets of Caesar's army as they crossed the Alps,[7] we could not restore the actual event, nor the real time thereof. Nevertheless the mind, by a splendid bound,

[7] Cf. C. E. M. Joad, *Mind and Matter* (New York: Putnam, 1925), p. 52.

leaps the indefinitely divisible gap between the ultimate and the non-ultimate, abstracts the elemental, creates the significance of infinity, and judges of its objective reality. In this adjustment struggle, the mind is limited in so far as it does this indirectly, by composition and division; it is unlimited in the receptive scope of its judgment. Aquinas, following Aristotle (Lib. III, *De Anima,* Ch. 7) says that the intellect is not limited in the reception of truth. And this appears to be the nature of the intellect, since it passes judgment on the reality or non-reality of anything whatsoever. "If metaphysics," says Wilhelm Wundt,[8] "has any purpose at all, it is surely to solve in a coherent theory of the whole those problems which experience furnishes, but with which experience cannot competently deal." This is not at all in accord with the pragmatic sensationalism of Mach[9]: "All that we can know is reduced to sense perception; and all that we can wish to know is given in the solution of the mathematical problem, in the knowledge of the functional dependence which exists between sense-elements. This exhausts the sources of the knowable." This sets sensation as the ultimate in scientific knowledge. The efforts of science should be directed toward the production of new and different sensations, not to experiments on real objects. The only possible production is self-modification: a theory or hypothesis is impossible.

Adjustment means the fitting of new parts into what is already in operation, or rearranging the parts of a running machine so as to bring it to higher efficiency and make it run more smoothly. The philosophic struggle is to adapt new and rearrange old ideas without destroying the central source of power. Despite aeroplanes, radios, high speed, new books and new wars, does God remain, is man individual, has he still hope

[8] *The Principles of Morality* (trans. Washburn, New York: Macmillan, 1901), p. 31.

[9] Cf. Leslie J. Walker, *Theories of Knowledge* (London, 1911), p. 456.

for final survival? Were these old ideas purely resinous exudations to prevent the spread of sores in the past, rendered unnecessary by modern intellectual antisepsis? Rather, they are the very life, from which every new bud must derive its vitality. As often as not, the difficulty lies with words. The term "mind" is itself confusing. Frequently it is not clear whether it refers to the mind of one man, the mind of the race taken as a unit or supposed to be a unit, the agreement of many individuals in some single opinion, or whether or not the Divine Mind is included in the generalization. "Mind has solved the problem": does this mean that the solution is now part of the mental property of every individual? "The universe proceeds from mind"; "mind is the sole existent." Such phrases cannot signify the individual understanding or the present content of the consciousness of some one man [10]; it is only rarely that a clear distinction is made between the Divine Mind and the personal mind of men taken singly. Monists, especially idealists, and some new realists, put mind as the sole or as a universal function or potentiality of nature.[11] Thus materialism becomes idealism, and all "matter" is "psychic" stuff and nothing else. If mind is solely one, obviously it is essentially the mind which I, the Self, my Self, possess. There is no other mind whose operation, or content, is for me genuinely bounded by itself, of which there is possible introspection. The argument to the existence of other minds is an analogy which is proven to work so often that its correctness is universally accepted. But this individuation which shuts off our mind from our neighbors', and from the

[10] J. B. Baillie, *Contemporary British Philosophy* (New York: Macmillan, 1924), p. 16, recalls the statement of Voltaire, "Solipsism is a form of lunacy."

[11] Cf. Durant Drake, *Mind and Its Place in Nature*, pp. 241, 243; Titchener, *A Textbook of Psychology* (New York: Macmillan, 1911), p. 6; Bosanquet, *The Meeting of Extremes in Contemporary Philosophy* (London: Macmillan, 1921), Preface, Ch. I, p. 4, *passim*.

infinite, or cosmic, or whatever all-embracing mind be set up, is a fact, and a self-evident limitation on the struggle of mind.

This individuation is styled by Hocking [12] " the mysterious isolation of self from self ". Hon. Bertrand Russell [13] deems that we infer the existence of other minds from their bodies by analogy, and that this analogy " in waking life is only to be preferred to that in dreams on the ground of its greater consistency ". Bradley [14] would not accept this isolation from other ' reals ', but held that my ' real world ' is a construction from my felt self. " In the end ", he said, " you have no way of distinguishing such a (dream) self from the self which is normal." J. B. Baillie [15] emphasizes the singleness of the individual's life: " Consciousness ", he says, "which pervades all experience is the consciousness of a living individual." He will not, however, accept as ultimate the consequences of logical procedure, which merely furnishes one kind of experience; he argues that " common sense does not allow us to admit that there are other selves in the world except our fellow creatures ". Perceiving the separation which exists between mind and mind in living men, he rebels against the condition of human nature in which it can have no other normal experience of certain ultimates than that which is arrived at by logical sequence and contained in the conclusion of a syllogism.

All adjustment must be brought about under these human limitations. The radical evolutionist points to the developments of a distant future, but holds out no hope for the perishing individual of the present. Some have sought to cast off these trammels by " love " or " feeling " with Benedetto Croce and the school which would bring down mysticism to the level of the ordinary; we can sympathize, but, as Bosanquet

[12] *Studies in Human Experience*, quoted by Bosanquet, *op. cit.*, p. 9.

[13] *Our Knowledge of the External World*, p. 86; cf. Bosanquet, *op. cit.*, p. 30.

[14] *Essays*, p. 30.

[15] *Contemporary British Philosophy*, p. 22.

remarks, a reasonable man cannot sit down with them. If our limitation is the result of some positive restraining force, this force is not reported to the self by any sense or feeling, pressure, pleasure, pain or enjoyment. By desire or fancy the poet bursts the shackles which hold him to earth: his achievement is wholly in the realm of the ideal, an imaginative utterance of Tennyson's "larger hope" which another poet, Campbell, says "springs eternal in the human breast". The poet casts out all claim to cold reason; he does not aim at adjustment to man's practical destiny. The ultra-realist who includes dreams and dream-worlds among the objects to whose reality experience testifies must be classed with the scientist who still searches for phlogiston or calculates the eclipses in the cycles and epicycles of the Ptolemaic system. To translate such views into practical action would set the whole pagan mythology on the pedestal of truth and give back to the world the entire kingdom of the fabulous. Mankind must have a working adjustment to the truths which are ineluctable. Science needs a real world, philosophy postulates a real mind. Together they form a double possession of the human personality.

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THE TELEOLOGY OF ST. THOMAS

SINCE the publication, in 1874, of Janet's *Les Causes Finales,* teleology has had its vicissitudes. In spite of his well-grounded plea for the recognition of purpose in nature, the mechanistic philosophy, during half a century at least, has ruled speculation in cosmology and especially in the interpretation of the findings of science. This again has afforded ample opportunity for mechanicism to go its full length and thereby arouse suspicion regarding its claims. Had it proceeded more cautiously and made sure of each step, remaining always within its legitimate domain, it probably would have secured for itself a stronger position. It would at any rate have forestalled much of the criticism which it has encountered on philosophical grounds.

To speak of "the breakup of the mechanistic universe" is premature. Mechanicism we have with us always and shall have as long as there is mechanism in the universe. It bears witness to that orderliness in which teleology finds its strongest support. It serves also as a warning against the abuse of final causes which is as fatal to philosophy as is the undue extension of the mechanistic account. For this reason, the new teleology is temperate. The reaction which has set in proceeds steadily and yet with moderation. It aims, not at sweeping out mechanical principles and explanations but rather at securing, along with these, a reasonable place for a reasoned teleology. So far as it succeeds it will establish more firmly the truth that is in mechanicism by paring off the exaggerations with which that philosophy, to its own disadvantage and peril, has been encrusted.

The present teleological trend gets an obvious significance as arising within the borders of science, the home-ground of mechanistic theory. Significant also is the fact that the move-

ment received its impetus chiefly through research in biology, the department in which evolutionism sprang up and flourished. Often it has been noted that just when mechanicism seemed to have intrenched itself in psychology, the attempt has been made anew to carry teleology over from mind into nature. The present movement is more than a protest or a merely defensive reaction. If it has not yet accomplished all that was intended by its originators, it has made the teleological problem the center of vigorous discussion.

Quite naturally, the purposive consciousness has been subjected to closer scrutiny. If one is to ascertain whether telicity be found in the external world, one must first give a definite meaning to " end," " intention " and other cognate terms which often are hazy in thought and ambiguous in application. The needed analysis has been facilitated by improvement in psychological method, as can be seen from a comparison of Von Hartmann's results with those of Warren, Hobhouse and McDougall. It can be fairly said that the details of the purposive consciousness have been brought to view with increasing clearness and accuracy.

There remains, however, the strictly philosophical problem. Its solution, though not completed by psychological analysis, is surely brought nearer as the empirical data are more thoroughly sifted. The facts are known; what is further needed is their interpretation in terms which philosophy can furnish. Given such and such mental events, we have to inquire how they are related to one another and to purposive action. Is purpose simply a peculiar form of ideation which somehow is followed by action and attainment? Or, is that attainment an effect whose production involves causation? As Fullerton states the question: " Is the end a cause at all? ".[1]

It is by no means a new question. Nor are the answers given it now, whether affirmative or negative, different in prin-

[1] *A System of Metaphysics* (New York, 1914), p. 529.

ciple from those which are strewn along the course of history, from Aristotle on through the Middle Ages to Spinoza and down to the beginning of the modern era. With all our advances in psychology on one hand and physical science on the other, the teleological problem reopens the discussion of concepts which have been central and fundamental in the metaphysics of the past. Even the fluctuations of epistemology have not gone far enough in any direction to make the investigation of final causes either idle or fruitless.

That the Scholastic writers should have attached great importance to the final cause is intelligible when one considers their manifold indebtedness to Aristotle. But for the Schoolmen teleology had a wider scope and a deeper meaning than that which the Philosopher discerned in it. In their view purpose is the theme which runs through the whole of creation, maintains order and gives human life its ultimate value. Not the whence alone nor the whither alone but both these and with them the why formed the chief concern of the leaders of medieval speculation.

St. Thomas left no separate treatise on teleology. His teaching on the subject, however, can easily be gathered from his works. The principle of finality for him is basic, on a par with that of efficient causation and, in one sense, of greater importance. It permeates his reasoning on all the weightiest problems of philosophy and theology. The end is not simply a cause; it is the *causa causarum*. Action for the sake of an end is not peculiar to man: *omne agens agit propter finem*.

In this comprehensive statement, animate and inanimate, conscious and unconscious things are included without distinction as to their specific natures or qualities. They are regarded simply as agents. Action as such has finality for its characteristic. The reason is:

"Si agens non tenderet ad aliquem effectum determinatum, omnes effectus essent ei indifferentes. Quod autem indifferenter se habet ad

multa non magis unum eorum operatur quam aliud: unde a contingente ad utrumque non sequitur aliquis effectus nisi per aliquid quod determinetur ad unum. Impossibile igitur esset quod ageret. Omne igitur agens tendit ad aliquem determinatum effectum quod [qui] dicitur finis eius." [2]

In the agent, therefore, there is a tendency not merely to do something in general but to produce a *determinate* effect: otherwise action would be impossible. This indeed lies in the very nature of tendency. Just as movement is always and necessarily toward some point, that is to say, in some direction, so the tendency of action is toward a definite effect: and this is the end.

Here it might be urged that a sort of indifference is shown, e. g., by purely material things. An arrow has no preference for this or that target nor does a ball require to be thrown in one direction rather than another. Moreover, it is the indifference of things that makes them useful to man, in various ways and for various effects. The printing of these words is possible because it is quite indifferent to the metal what type shall be made out of it and to the type itself in what order it shall be set. Steel is serviceable because it can be made into a watch-spring or a propeller shaft, as the maker decides. If any of these things were so highly specialized that it would do just this and nothing else, its utility would be rather limited.

In answer it should be noted that according to St. Thomas the "effect which is called the end," is determinate because it results from a specific property of the agent.

"Omnis autem agentis impetus ad aliquid certum tendit; non enim ex quacumque virtute quaevis actio procedit, sed a calore quidem calefactio, a frigore autem infrigidatio; unde et actiones, secundum diversitatem activorum, specie differunt." [3]

The agent, then, cannot be indifferent because its action is

[2] *Contra Gentiles*, III, 2.
[3] *Ibid.*

specified by its own nature. This determines the range within which it can be made to produce a variety of results. But within that range each of its effects gets its character from the agent's nature and properties. Upon these depends its adaptability to human purposes. Its uses become more varied as new qualities in it are discovered. Yet, however these be multiplied, each tends to the production of a determinate effect. The determinability of the agent has its limits. It matters not to the steel whether we shape it this way or that, take advantage of its hardness, its flexibility or its electric conductivity. So long as we keep within the limits set by its nature, it is indifferent as to the particular quality which we turn to our uses. When through ignorance or mistake we try to make the metal overstep the bounds fixed by its nature, we, not the steel, are doomed to failure.

But if this be true, it would seem that our teleology is only mechanicism with another name. If "end" means nothing more than determinate effect, it at best designates the result which follows of necessity upon the action of an efficient cause. And, at worst, it may suggest an anthropomorphic interpretation of events which, in themselves, are altogether void of purpose or forward-looking tendency. Seeing a certain effect produced, we read back into the agent not merely a capacity determined by nature, but also a kind of seeking after just this particular result. Does not St. Thomas himself insist that *"quod ultimum est in executione, primum est in intentione"*? Hence, apparently, the inference that, words apart, we are looking at the same thing from two different view-points, the before and the after. Not, therefore, the series of phenomena objectively considered, but our mode of interpretation, is what attaches the label of purpose to things and relations which got along well enough without it before there was any human thinking and which now go their own mechanical way regardless of our thought.

As preliminary to the discussion of this point, the words of St. Thomas may be cited here. Under the title, "*Omne agens agit propter finem,*" he says: "*Ostendendum est igitur quod omne agens in agendo intendit aliquem finem.*" Then follows the argument:

"In his enim quae manifeste propter finem agunt, hoc dicimus esse finem in quod tendit impetus agentis; hoc enim adipiscens dicitur adipisci finem, deficiens autem dicitur deficere a fine intento, sicut patet in medico agente ad sanitatem et homine currente ad certum terminum; nec differt, quantum ad hoc, utrum quod tendit in finem sit cognoscens vel non; sicut enim signum est finis sagittantis, ita est finis motus sagittae." [4]

The meaning obviously is that "*intendere finem*" prescinds entirely from the possession or non-possession of knowledge. Every agent, in acting, moves toward an end, whether or not it be aware of that end, of the drawing power which the end exerts or even of the tendency by which it, the agent, yields to the attraction. Consequently, for St. Thomas, there is no such thing as a purely mechanical process, i. e., a process which gets its whole character and determination from the efficient cause without any reference to an end. That our thought recognizes the identity of that which is accomplished with that which is intended, he expressly affirms. But this fact does not eliminate the prior fact, namely that something is intended. Furthermore, that which is recognized as the same does not present in intention just those characteristics which it presents as realized through action. In a sense it is true that the house finished according to the architect's plan is the same in his planning mind and in its actual existence as a structure. In another sense, there is a difference: people live in real houses, not in blue-prints. The "double aspect theory," then, offers no satisfactory basis of conciliation as between mechanicism and teleology.

[4] *Ibid.*

St. Thomas, however, in the same chapter, makes it clear that, while every agent acts for an end, the mode of action and the character of finality vary according to the nature of the agent.

"Omne agens vel agit per naturam vel per intellectum. De agentibus autem per intellectum non est dubium quin agant propter finem; agunt enim praeconcipientes in intellectu id quod per actionem consequuntur, et ex tali praeconceptione agunt; hoc enim est agere per intellectum. Sicut autem in intellectu praeconcipiente exsistit tota similitudo effectus, ad quem per actiones intelligentis pervenitur, ita in agente naturali praeexsistit similitudo naturalis effectus ex qua actio ad hunc effectum determinatur; nam ignis generat ignem et oliva olivam. Sicut igitur agens per intellectum tendit in finem determinatum per suam actionem, ita agens per naturam. Omne igitur agens agit propter finem."

The passage contains several points which call for explicit consideration:

1. A distinction is drawn between agents endowed with intelligence and those which lack such endowment. To the former class belongs the human mind; to the latter, things which act "*secundum naturam*," i. e., mechanically. Action toward an end is common to all; the conditions under which action takes place differ.

2. In all agents, again, whether intelligent or non-intelligent, there pre-exists a likeness of the effect which is to be produced. This is an application of a more general principle regarding the form and its functions. St. Thomas repeatedly states that the substantial form which fixes each thing in its specific nature, is also the principle of action. Inevitably, therefore, the agent tends, as far as possible, to reproduce itself by bringing into existence an effect of like nature with its own. "*Omne agens agit sibi simile.*"

3. The specification of action, however, is not of the same type in all cases. In agents devoid of intelligence, the form

whence action results, is fixed by nature, stamped into the very texture of the thing, so that the mode of action under the same conditions is invariable. In such agents there is preexistence of the effect but no prevision, an impetus to act yet without any capacity to select among various possible courses of action.

Intelligent agents, on the contrary, preconceive the end for which they act. Hence they are said to act "*per intellectum.*" The representation of the effect is not ingrained in their original nature. It is a product of their intellectual activity. Into the details of its formation St. Thomas does not enter. These may involve imagination, memory and association; the essential point is that the idea of the end is preconceived. It is a present thought with a future reference. As a psychological process, it, like every other idea, sets an object before consciousness; but as the idea of an end it presents an objective, "*aliquid agendum.*" One may form the idea of e. g., the pole-star without the slightest thought of action. In the same way one may study and admire the plan of a house and yet have no intention of building. Telicity implies, even before the tendency to act emerges, that the idea shall point to something beyond itself, a reality which now it forecasts and in time will confront.

4. In a later section of the same chapter St. Thomas introduces a distinction which should not be overlooked:

"Actio vero quandoque quidem terminatur ad aliquod factum, sicut aedificatio ad domum et sanatio ad sanitatem, quandoque autem non, sicut intelligere et sentire; et, si quidem actio terminatur ad aliquod factum, impetus agentis per actionem tendit in illud factum; si autem non terminatur ad aliquod factum, impetus agentis tendit in ipsam actionem. Oportet igitur quod omne agens in agendo intendat finem, quandoque quidem actionem ipsam, quandoque aliquid per actionem factum."

In other words, there may be action for action's sake. Even though other effects issue from the action, this and not those,

constitutes the end. Evidently, however, such finality is peculiar to conscious beings. Inanimate things do not act "just to be doing something." The difference which these statements bring out so clearly should suffice to show that the teleology of St. Thomas is neither anthropomorphic nor psychomorphic. Telicity belongs to action as such, consequently to every action. Once admitted that things act, then, according to St. Thomas, it is not only permissible to recognize final causes in nature; it is logically necessary. The only ground on which that recognition could be withheld, would involve the further assumption that what we call the actions of other beings are not really such but are merely the projections of our conscious experience into the external world, if any such world there be.

That we do tend to project our mental states into the behavior of other beings, even into inanimate things, is obvious. But, unless we adopt an extreme subjectivism, we must admit that there are some characteristics which we and the "other things" have in common. If a characteristic is already in a thing, our projection is superfluous. We are not justified in thinking that animal suffering is the same as our pain, or that chemical affinity is identical in nature with our loving, or that magnetic attraction is like the fascination which we experience. We may be tempted to such ascription, but if we resist the temptation and content ourselves with mere analogy, it is evidently because we discern, or think we discern, in those other things a nature or a form of existence which so differs from our own that it forbids the ascription to them of what we find in ourselves.

Whether the end be the action itself or some resultant from it, the idea that gives impetus to the agent must be more than a representation of an object. It must present something which, first of all, is possible. Imagination may picture any number of things which are pleasing enough as day-dreams, but if they are recognized as impossibilities, they do not become ends.

Possibility again has reference to the agent's own ability. The question is not—can such a thing be done, but, can I do it. I may be accurately informed regarding what is needed for an overseas air flight; I may admire the hero who accomplishes it; yet knowing that it is beyond my power, I refrain from any purposing in that line.

My refraining is a subjective affair. It is my estimate both of the difficulties involved and of my capacity for such feats that withholds me. I may exaggerate the one beyond reality and minimize the other to an excess of depreciation. But if the undertaking appear to me not only hazardous but, for me, impossible, it remains simply an idea or a plaything of imagination. Should I, conversely, overrate my ability or miscalculate the difficulty, the error does not make the end less attractive or my purposing less decided.

Within the range, wide or narrow, of possibility as I gauge it, there are various actions and things each of which, from time to time, may be represented in my thought. Of each my knowledge is clear, correct and thorough. Yet it may happen that none of them arouses my purposive consciousness. To do this, the idea must present its object, as possible indeed, but also as good.

St. Thomas now lays down another general principle: "*Omne agens agit propter bonum.*" In support of this, he uses arguments which parallel and develop those which go to show that every agent acts for the sake of an end. He maintains therefore that "*propter finem*" and "*propter bonum*" are the same. That which gives a thing the character of end over and above that of object apprehended by the intellect, is precisely the good it offers, i. e., something which in the first place is suitable (*conveniens*) to the nature of the agent and furthermore is such that, if it be obtained, it will enhance or raise to greater perfection the good which the agent already possesses.

As, however, in regard to the possibility which is the prime

requisite the end must present, so in regard to the goodness of an object, subjective estimation is decisive. That which I judge to be good may, in point of fact, be the opposite; but I am not thereby hindered from setting it up as an aim and striving for it. What, under one aspect, is evil and is recognized as such, may under another aspect be, or appear to be, good. So judging it, I adopt it as an end. I seek it "*sub ratione boni.*"

The value-judgment is pronounced indeed by the intellect, for it is this faculty that discerns the relation between the quality of an object proposed as end and the status of the agent with regard to the latter's perfectibility. In either respect, or even in both, the intellect may err. Still, its appreciation of a thing as good will reflect the agent's character. Hence the dictum which St. Thomas adopts from Aristotle: "*qualis unusquisque est, talis finis videtur ei.*"

But while it is true that every agent acts to attain an end, and consequently that every action has a purpose, Aquinas emphasizes the difference, on this score, between agents that are intelligent and others which are not intelligent.

"Agens per intellectum agit propter finem, sicut determinans sibi finem; agens autem per naturam, licet agat propter finem, non tamen determinat sibi finem, quum non cognoscat rationem finis, sed movetur in finem determinatum sibi ab alio. Agens autem per intellectum non determinat sibi finem nisi sub ratione boni; intelligibile enim non novet nisi sub ratione boni, quod est obiectum voluntatis; ergo et agens per naturam non movetur neque agit propter aliquem finem nisi secundum quod est bonum, quum agenti per naturam determinetur finis ab aliquo appetitu. Omne igitur agens propter bonum agit."[5]

The important concept here is that of "*appetitus.*" According to St. Thomas every being, however constituted and specified, has a natural inclination toward those things which are in keeping with its nature and which it does not yet possess. "*Appetitus naturalis est inclinatio cuiuslibet rei in aliquid ex*

[5] *Op. cit.*, III, 3.

natura sua unde naturali appetitu quaelibet potentia desiderat sibi conveniens." [6] Appetency is the expression of a need: "*appetitus autem omnis est propter indigentiam, quia est non habiti.*" [7] *Appetitus,* then, implies capacity and adds to it a sort of reaching out for something which the appetent lacks.

Since that something must accord with the appetent's nature, both it and the character of the inclination toward it will vary as the nature of the appetent varies. In inanimate things appetence is simply the tendency to behave in a certain way which is determined by their properties, as instanced in chemical affinity. Higher in the scale is animal desire aroused by sensory perception of an appetible object and thereby specified to something in particular. In man both these elemental forms are found. They are woven into the organic structure and functions, either below or above the base-line of consciousness. In addition, human endowment includes the "*appetitus rationalis,*" or will, whose characteristic quality is self-activity. It falls under the general designation of "*appetitus*" inasmuch as it seeks (*petit*) that which is good. But since the good is presented in the form of a judgment pronounced by the intellect, the will gets its direction not from external agencies but from an activity inside the mind.

St. Thomas draws up a scale of appetitive functions in which the different levels in an ascending series are marked by the extent to which the appetent initiates and controls its activity. The passage is given here both as expressing the thought of Aquinas on this phase of the problem and also as offering a typical illustration of the method by which he so frequently carries a principle with its various modifications through the whole range of being.

"Principium cujuslibet operationis est forma per quam aliquid est actu, quum omne agens agat in quantum est actu. Oportet igitur quod

[6] *Sum. Theol.*, I, 78, 1 ad 3.
[7] I. *Phys.* 15e.

secundum modum formae sit modus operationis consequentis formam. Forma igitur quae non est ab ipso agente per formam, causat operationem cujus agens non est dominus. Si qua vero fuerit forma quae sit ab eo qui per ipsam operatur, etiam consequentis operationis dominium habebit. Formae autem naturales, ex quibus sequuntur motus et operationes naturales, non sunt ab his quorum sunt formae, sed ab exterioribus agentibus totaliter, quum per formam naturalem unumquodque habeat esse in sua natura; nihil autem potest sibi esse causa essendi; et ideo quae moventur naturaliter, non movent seipsa; non enim grave movet seipsum deorsum, sed generans quod dedit ei formam. In animalibus etiam brutis, formae sensatae vel imaginatae moventes non sunt adinventae ab ipsis animalibus brutis, sed sunt receptae in eis ab exterioribus sensibilibus quae in sensum agunt, et dijudicatae per naturalem aestimationem; unde, licet quodammodo dicantur movere seipsa, in quantum eorum una pars est movens et alia est mota, tamen ipsum movere non est eis ex seipsis, sed partim ex exterioribus sensatis et partim a natura; in quantum enim appetitus movet membra, dicuntur seipsa movere, quod habent supra inanimata et plantas; in quantum vero ipsum appetere sequitur de necessitate in eis ex formis acceptis per sensum et judicium naturalis aestimationis, non sibi sunt causa quod moveantur; unde non habent dominium sui actus. Forma autem intellecta, per quam substantia intellectualis operatur, est ab ipso intellectu, utpote per ipsum concepta et quodammodo excogitata, ut patet de forma artis quam artifex concipit et excogitat, et per eam operatur. Substantiae igitur intellectuales seipsas agunt ad operandum, ut habentes suae operationis dominium; habent igitur voluntatem." [8]

In view of the foregoing, the characteristics of the end as St. Thomas conceives it may readily be summarized. It is, or is thought to be, possible of attainment by the agent. It is in conformity with the agent's nature and it supplies, or appears to supply, a want of that nature. Hence it calls into activity and directs upon a determinate object the appetitive powers, rational or other, which exist in the agent.

The response of these powers is the central feature in the

[8] *Contra Gentiles*, II, 47.

telic process. *"Agens intendit in finem."* This is the meaning of the term which plays so conspicuous a part in psychology and ethics as well as in ordinary discourse. *"Intentio,"* says St. Thomas, *"sicut ipsum nomen sonat, significat in aliquid tendere."*[9] More completely he defines human intention in these terms: *"nomen intentio nominat actum voluntatis, praesupposita ordinatione rationis ordinantis aliquid in finem."*[10] It is the intellectual faculty that perceives the possibility and desirableness of the end, discovers the means and judges their relative value. These items settled, it remains for the will to determine that the end shall be realized, in other words, to *"intendere in finem."* That the intention includes something more than the desire of the object as such appears from the further statement of St. Thomas in the same text: *"non enim solum ex hoc intendere dicimur sanitatem quia volumus eam, sed quia volumus ad eam per aliquid aliud pervenire."*

Intention, then, is no creative fiat of the will. It fixes upon an aim and at the same time determines the several stages through which action shall move toward final attainment. But the movement could not be initiated, and much less carried forward, by the idea only of the end. The essential factor is volition. Nothing shows more clearly than purposive experience the importance of the will and the necessity of admitting it as a distinct mental agency. Psychological theories which would eliminate will and transfer its functions to ideas by investing them with motor activity, may lay claim to economy. But they leave unexplained the fact that the idea of an object, even when accompanied by desire, does not avail for the forward movement which purpose involves, unless the will give the signal to advance.

Turning now to the question whether the end can be a cause, one finds an answer in the generic definition of cause as that

[9] *Sum. Theol.*, I-IIae. 12. 1. c.
[10] *Sum. Theol., loc. cit.*, ad 3.

in virtue of which another thing comes into existence. In this broad sense, "cause" must include the purpose which prompts to action no less than the agent which acts. For the latter evidently is somehow set going by the end on account of which it acts. Hence the statement of St. Thomas: *"ly propter importat habitudinem alicuius causae."* [11]

One difficulty which arises when the attempt is made to think of end as causing is suggested by the principle which St. Thomas himself so often applies: *omne agens agit secundum quod actu est.* Only that which is can act. Now the end is something in prospect, a result which the purposing will decrees shall be, but which so far has only a potential status. How then can it *do* anything? As Hobhouse in citing the objection asks: "Does the non-existent cause the existent?" [12] And as he further points out, it may happen that the end proposed will never come into existence. On what ground, then, or in what sense can it be given the name of cause?

St. Thomas meets the difficulty and at the same time shows how the final cause differs from the efficient:

"nihil autem prohibet id quod est posterius tempore, antequam sit, movere secundum quod praecedit in actu animae; sicut finis, qui est posterior tempore, movet agentem secundum quod est apprehensus et desideratus ab ipso; sed illud quod nondum est in rerum natura, non movet secundum usum exteriorum rerum; unde causa efficiens non potest esse posterior in esse ordine durationis, sicut causa finalis." [13]

The "motive force," then, of the final cause is due not only to the character of good which, as preconceived, it presents to the mind, but also to the fact that it is not yet an extra-mental reality. Its efficacy is different in mode from that of external things, since these, acting as efficient causes, must be antecedent to their effects. Or again, it may be said that the end, con-

[11] *Sum. Theol.* II-IIae, 27, 3.
[12] *Development and Purpose* (London, 1913), p. 314.
[13] *Sum. Theol.*, III, 62, VI.

sidered strictly and precisely as end, does precede its immediate effect which is the stirring of the agent into action. Through this action the end gets itself transferred, so to speak, from the ideal order to the order of reality. Thereupon its function as end terminates. Quest becomes possession and desire is fulfilled in enjoyment. "*Finis est in quo quiescit appetitus agentis vel moventis, et eius quod movetur.*" [14]

There now arises the question as to the way in which the end exerts its causal influence. Since it has not yet come into being, it cannot properly be thought of as pulling toward itself the agent or the will by a sort of magnetic attraction. Nor is a complete answer to the question supplied by the distinction commonly made between the intentional order and the real order. For there still remains the problem as to the way in which the "intention" operates. Besides, there is always the lurking tendency of thought to bring in the idea of the efficient cause, and so make it appear that the term "final" is simply a disguise—a solution which would import mechanicism into the mind free of duty.

St. Thomas avoids this sort of smuggling by comparing the efficient cause with the final: "*sicut influere causae efficientis est agere, ita influere causae finalis est appeti et desiderari.*" [15] To be sought and desired implies of course certain qualities in the object. But the seeking and desiring are processes within the agent. They are initiated by the idea which the intellect offers to the appetent faculty of something which is either really or apparently good. In consequence of this presentation, the appetitus undergoes a change which brings it into conformity with the appetible object. Hence a certain complacency or love for the object on the part of the appetent faculty. "*Prima ergo immutatio appetitus ab appetibili vocatur amor, qui nihil est aliud quam complacentia appetibilis; et ex hac complacentia*

[14] *Contra Gentiles*, III, 3. [15] *De Veritate*, XXII, 2.

sequitur motus in appetibile, qui est desiderium; et ultimo quies, quae est gaudium." [16]

What is desired, however, is not the idea of the end, but its realization. Accordingly, when the will ordains that the desire shall be gratified, it proceeds to adopt the means, i. e., the series of actions which are needed to make the end real. Each of these in turn, because of its relation to the end, has its proportionate share in the love aroused by the end itself, and consequently in the causality which that exerts. "*Causalitas autem finis in hoc consistit quod propter ipsum alia desiderantur.*" [17]

From this view of telicity it might appear that the end is not only a cause but is moreover the cause of its own existence. Before it has any real being it modifies the appetency of the agent, stirs up "*amor*" for itself and leads the will into active volition. And all this it may do even though, like a mirage, it remain forever unreal. St. Thomas also, citing Aristotle, says that appetition moves in a circle: "*Appetitivus motus circulo agitur.*" And he explains this by pointing out that "*Appetibile movet appetitum, et appetitus tendit in appetibile realiter consequendum, ut sit ibi finis motus ubi fuit principium.*" [18] Is it a vicious circle? The "*ibi*" in this case is plainly the really existing object in which the purposive action terminates. But since it was not yet real when the action began, how can it be called the "*principium motus*"?

In reply it might be said that the circle is not vicious but incomplete. If we go back to the true starting point, we shall find that this is some real object. Seeing the house already built by another, I form the idea of a similar house for myself. The idea arouses desire and the will says—go and do likewise. Thus my neighbor's house, a real thing, works out through my perception, inclination and volition, to the production of an-

[16] *Sum. Theol.* I-IIae, 27, 2.
[17] *Contra Gentiles*, I, 75.
[18] *Sum. Theol.*, I-IIae, VIII, 2.

other house equally real. In this case, the end of the operation is factually there where it had its beginning. Through the sequence—real–mental–real—efficient causality carries on from point to point until it comes full circle to the point of origin. The telic process within the mind, however complex, is merely one phase in the whole series of events. It is the "agent" in the ordinary sense of the term, acting upon the direction received from its "principal" which is none other than the real object perceived at the outset.

While this view might be approved by the mechanicist, it overlooks several important items. In the first place, however attractive the idea of building a house on the pattern offered by the one I see, it is not a compelling idea. It may arouse a desire which hangs on in the mind as a velleity only; I would like to have just such a house. But this does not constrain the will. Even after I have decided to build a house, there are numberless possible houses from which I can choose; and none of them is so imperatively necessary that the idea of it forces me to select it rather than any other.

Again, it commonly happens that though the perceived object suggests the doing or the making of something similar, the agent's consideration of his own wants leads to various modifications of the original suggestion. As in many processes of imitation, the mind discovers what is, or what seems to be, a better way. What the will finally adopts, through its free selection, is the improved plan, devised by the intellect. It can hardly be said that the house as at first perceived is the efficient cause of the house which is subsequently built.

A wider circle of telicity is drawn by St. Thomas when he looks beyond immediate purposes to consider the universal order and its end.

"Finis ultimus cuiuslibet facientis, in quantum est faciens, est ipsemet; utimur enim factis a nobis propter nos, et si aliquid aliquando

propter alium homo faciat, hoc refertur in bonum suum, vel utile, vel delectabile, vel honestum." [19]

What we set up as end is, in the last analysis, our own good. Final causality, though it implies a tending toward something else, curves back in the long run to the agent himself. The attainment of the particular end which is sought through action serves as a means toward the ultimate objective, which is self-betterment in some form or other. The agent as efficient cause uses thought, volition and action in behalf of himself as final cause. Thus in a deeper sense it is true to say that the beginning of the telic process is identical with its termination.

Consistently, St. Thomas assigns to the end the highest rank among causes. It holds the primacy not merely of worth but also of causal efficacy: "*Finis inter alias causas primatum obtinet, et ab ipso omnes aliae causae habent quod sint causae in actu; agens enim non agit nisi propter finem.*" [20]

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[19] *Contra Gentiles*, III, 17.
[20] *Ibid.*

ONE ASPECT OF EINSTEIN'S THEORY: THE EQUIVALENCE OF LIGHT

"THE progress of physical science during the nineteenth century, particularly during its latter half," writes Professor Whitehead in his work on *Science and the Modern World,* "has been not only extremely rapid but so revolutionary in character as to oblige us to discard half of the assumed verities of the eighteenth." While we all recognize the partial truth of this statement, it should not make us forgetful of the fact that certain problems, essentially philosophical as well as physical in their nature, are as old as thought itself, and have been pondered by men in all ages. It is true that in these latter days discovery and invention have followed hard upon one another, and the rapidity of our progress, the reversal of many accepted theories, have resulted in a loosening of fixed beliefs and, possibly, prepared the way for even so revolutionary a theory as that of Einstein's Relativity. Yet, of the four subjects which he has linked together in one, and which have made his name famous—space, time, motion, and gravitation—three are such as we have named. The relativity of motion, in the classic sense, has been acknowledged since the earliest times. All translational motion is, and in its nature must be, relative. There are, as we know, other modes of motion, molecular, the motion of changing states of matter, as from solid to liquid or gaseous, whose reality is attested by the energy expended or the heat evolved. But motion in the ordinary sense of transference or change of place is necessarily relative. Absolute isolated motion, without goal or point of departure, would be as inconceivable as space without content or time without event. From the star to the electron all cosmic bodies are in motion, and the vastness and universality of such motion are being brought home to us with greater force and vividness with each passing year.

Such relativity, however, has hitherto cast no doubt on the actuality of individual motion, nor rendered its calculation difficult. A passenger on a European steamer may pace the deck with a pedometer on his foot to mark the distance traversed as little disconcerted by the fact that the vessel, meanwhile, is moving East or West at so many knots an hour as he would be if walking from his own gateway to a nearby town, by the reflection that as he walked, Mother Earth, like a monster ship, was plunging through space at the rate of eighteen and a half miles per second in her journey around the sun, besides striving to follow her solar lord still further into stellar depths as he directs the apex of his way toward the constellation Lyra. Hitherto, we have contrasted relative with absolute, rather than with actual motion. But under Einstein's postulates, it would seem that we must revise many of our concepts. We turn, accordingly, to examine more closely the exact noumenal significance and bearing of his analysis of motion.

There are, it is true, physical problems of great import connected with Einstein's theory, and it is chiefly to his successful handling of these that he owes his reputation among scientists. His entire theory embraces many factors, and can be approached by many avenues, while his physical concepts are often so lofty in character as to compel admiration, especially his synthetic outlook on nature and his endeavor to reduce cosmic forces to one vast harmonic unity, as evidenced by his words of regret as to the links still missing "to bind together in one unified conformation" the work of Maxwell and Faraday with his own.[1] With the general public, however, it is the noumenal aspect of his theory which would seem to be by far the most arresting. The non-scientific world would hardly have been moved to a more than languid interest by the

[1] *Sidelights on Relativity*—Einstein's address before University of Leyden, 1920.

solution of the problem of Mercury's perihelion which had so long perplexed astronomers, had it not been adduced in evidence of the truth of Einstein's startling announcement of time as a fourth dimension. While neither the bending of light rays when passing near the sun, nor the possibility that the earth's diameter may be compressed to the extent of 2.5 inches in the direction of its forward motion would have won him his unprecedented celebrity nor focused all eyes upon him, had it not been for the revolutionary metaphysical theories which lay behind these phenomena, theories which seem to reach down into the walks of our daily life and cast the shadow of unreality upon all we had deemed most assured and unquestionable.

Einstein has been called a second Newton. Perhaps we might rather liken him to a second Kant. Kant was a great physicist as well as a metaphysician, yet it is upon his transcendental philosophy that both his renown and his influence upon posterity chiefly rest. So, too, should the relativity of Einstein win permanent footing in the scientific world, its effects for good or ill would (as it seems to the writer) be chiefly noumenal. As the aftermath of Kant's philosophy has reached far beyond the circle of those who intelligently accept or reject his antinomies, so too the haunting shadow of skepticism in physical data will be far more apt to dog the footsteps of those who but superficially follow Einstein's paradoxes than of those who probe them more deeply.

In his approach to physical problems, Einstein has built largely, although legitimately—since science does not progress by leaps and bounds but by slow, successive steps—upon the scaffolding raised by others. Rieman had suggested the idea of space curvature and worked out the formulas for a non-Euclidean geometry early in the nineteenth century. Maxwell and Hertz had established the electro-magnetic theory of light and demonstrated the existence of lines of magnetic force

in the ether. Lorentz and Fitzgerald had formulated their contractional theory of moving masses, while Minkowski had enunciated his doctrine of space-time continuum in words which Einstein might well claim as his own. "Henceforth, space in itself and time in itself sink into mere shadows, and only a kind of union of the two can be claimed as self existent."

It was reserved for Einstein, however, to strike the chord which was to arouse universal attention. This he accomplished by being the first to subject his metaphysical theories to the test of physical experiment, and with apparent success. Although his general theory, set forth in 1915, is much more comprehensive than the earlier special theory, yet it is upon the second law of this earlier theory, that of the constancy of the velocity of light, and the so-called principle of equivalence, that his rule for the measurement of relativity space-time intervals, as well as his correction of the Newtonian gravitational formula under the Lorentz transformations, depends. As he himself says in the reprint of his Princeton Lectures, delivered at that University in 1921: "The theory of relativity is often criticized for giving, without justification, a central theoretical rôle to the propagation of light. The situation, however, is somewhat as follows: In order to give physical significance to the concept of time, processes of some kind are required, which enable relations to be established between different places. It is immaterial what kind of processes one chooses for such a definition of time. It is advantageous, however, for the theory, to choose only those processes of which we know something certain. This holds good for the propagation of light in vacua in a higher degree than for any other processes which could be considered, thanks to the investigations of Maxwell and H. A. Lorentz." [2]

[2] *The Meaning of Relativity*, Princeton Reprint, p. 31.

In the enunciation of the first of his two, now famous, postulates, there seems nothing subversive of accepted ideas. The statement that "every Law of Nature which holds good with respect to a co-ordinate system, K, must also hold good for any other system, K′, provided that K and K′ are in uniform motion of translation," becomes when amplified and explained equivalent to the statement that "every Law of Nature may be stated in a form which holds good between all observers and objects, provided each is moving in a straight line with uniform velocity, and under such circumstances, no one could detect his own motion unless he made reference to objects outside his own moving system". This postulate, as we have seen, has long been acknowledged by thinkers, the motion of our own earth in relation to the sun being often quoted as an instance of long undetected relative motion. This motion, however, although relative, does not fall under the head of uniform motion in a straight line, to which Einstein confines himself in his special theory. But as he soon enlarges his conception to embrace curved or accelerated motion (i. e., motion acting under a constant force) we may note here one unique example of the detection of relative motion, that of the axial rotation of the earth. This cannot be detected by reference to the sun, and, as we know, remained for centuries undetected. But by Foucault's famous pendulum experiment, the axial motion of the earth was visualized. We shall see later how Einstein regards this exception.

Einstein's second postulate reads: "The velocity of light in a vacuum is a constant irrespective of the velocity of its source." This independence of the velocity of light of its source is a consequence of its wave motion, for it would not be true were Newton's emission theory of light valid. A stream of tiny corpuscles expelled in a straight line from a luminous body *would* be affected by the velocity of its source. But with vibatory motion this is not so; the *pitch* of light

waves, so to speak, like those of sound, is raised when their source is approaching, but the rate of propagation remains unchanged. The change of *pitch* consists in a slight shift toward the violet, or red end of the spectrum, as the source is approaching or receding, and is known as the "Doppler Effect." Einstein also believes the velocity of light to be the maximum speed possible to matter, regarding it, as do other recent scientists, as the motion of free electrons in space.

We have dwelt upon these facts because in postulating a constant speed for light, independent of its source, it would appear as if Einstein were providing us with an absolute measurement for motion at variance with his theory. He replies to this, however, by informing us that the velocity of light is constant also to the observer, irrespective of his own motion, and that such constancy is a deduction from his first postulate of relative motion. Here we might have expected the exact opposite, i. e., that we *would* be able to detect our own relative motion by comparison with that of light. Ordinary motion would, of course, be relatively too slight for such detection, but the motion of many radio-active emanations is quite comparable with that of light. Einstein's reasoning here seems to be that such detection would be incompatible with the principles laid down in his first law, for the very reason that it would furnish us with a fixed measurement of motion and that, therefore, its non-detection is in accord with those principles. Later, however, he makes it plain that he bases this second law on the Michelson and Morley experiment and that its confirmation rests solely on the result of that experiment. This was, as we know, a physical test of great delicacy, planned for the purpose of detecting the motion of the earth with respect to that of light, undertaken as early as 1887 and repeated many times since.

As our earth moves in its orbit at the rate of eighteen and one-half miles per second, we would have, at opposite points of

our orbit, a difference of velocity of thirty-seven miles with regard to the light rays, and it was thought this difference could be detected through an ingenious arrangement of multiple mirrors, by which opposing rays many times reflected met at last in a central mirror, upon which the slightest difference of "phase" would produce an effect of interference, showing that the rays did not exactly synchronize and that the light journey toward the advancing earth was a little shorter than on the opposite side. But no difference could be seen. Although the delicacy of the instrument was judged sufficient to detect a motion of even one-tenth that of the earth, the result was always negative.

It was suggested that the earth carried with it an envelope of ether, analogous to its aerial atmosphere, which would then be stationary as regards the earth. But this explanation was contradicted by several astronomical phenomena, particularly that of aberration. It was then thought that since the earth, besides its orbital motion, is moving through space in the wake of the sun, there might be a dead point in its orbit where these two motions counteracted each other, leaving our planet temporarily at rest, but this supposition also seemed forbidden by repeated experiment at different seasons. Finally, Lorentz and Fitzgerald advanced their contractional hypothesis, according to which all moving masses suffer a contraction of diameter in the direction of their motion. This, though plausible, seemed arbitrary in its application to the movement of our earth, and astronomers suspended judgment. Einstein, meanwhile, adopted the mathematical formula of this hypothesis for the *apparent* contraction which he posits as existing between all moving bodies and an external observer. As we have noted, it is solely from this experiment that Einstein's principle of the "Equivalence of Light" draws its validity, and since, in turn, this law becomes the basis of his units of measurement in space-time continuum, its reversal would invalidate the whole superstructure of relativity.

When we remember that it was the failure of the test concerning light pressure which made Newton abandon his corpuscular theory of light, yet that since then not only has this pressure been detected, but scientists are returning to a *modified* corpuscular light theory; when we recall that for nearly three hundred years no parallax of the fixed stars could be detected, although such detection was imperatively called for by the Copernican theory and its non-detection urged as evidence against it, we feel that a law of such far-reaching import as that of Einstein's Equivalence of Light demands still further confirmation from fact.

To meet such objection, Einstein promptly advanced certain experimental proofs of the truth of his theory. These evidences have been very differently evaluated by different scientists. While some English scientists of high repute, such as Eddington, Jeans, and Jeffreys, have accepted them and enthusiastically support his views, by others he has been severely criticized. In regard to the advance of Mercury's perihelion, Professor Pickering of Havard[3] remarks that Einstein has somewhat overshot the mark, his coincidence being almost too exact, since a part of the discrepancy between theory and observation (42″) must be due to the sun's oblateness, a factor only recently considered by astronomers, and that, moreover, the innumerable swarms of meteors surrounding the sun must also exert a similar accelerating effect, possibly sufficient to account for the whole discrepancy. A more severe criticism was voiced by Professor Poor of Columbia at the November meeting of the American Astronomical Association. Professor Poor claims to show that Einstein, in his original investigation of Mercury's perihelial term, while introducing a time correction into the Newtonian equation which he used as a first approximation to change astronomic into relativity time, left the *mass* of Mercury unchanged. But that mass in astronomy,

[3] ***Physical Side of Relativity.***

being a *derived* function involving both time and distance, this omission introduced a logical error which vitiated his work.[4] It is only just to note, however, that this original derivation of Einstein's is no longer used by relativists, its place being taken by the Schwartzschild Revision, as he himself tells us in the reprint of his Princeton Lecture. (p. 103) Considering the abstruse character of much of Einstein's mathematics and the meed of homage accorded it, it might seem to demand some courage to criticize his methods. Nevertheless there is one other point in his formulas which has called forth comment from some of his reviewers. It is that in which he introduces the velocity of light as the fourth dimension of his space-time continuum and the time correction of his gravitational equations (under the Lorentz transformation). The distance between two points in space, now become the "separation-interval" of his space-time world, is no longer expressed in terms of the three geometrical axes which define their position, but by these three axes minus a time factor as a fourth dimension. This factor is not simply time itself, but time multiplied by the velocity of light. Now, this velocity is a *constant,* and time multiplied by a constant is a purely spatial concept, and a very familiar one. If a man rows up stream for two hours at four miles an hour, the question is, how far does he go? And the answer is in distance. If this factor were always explicitly expressed, this would be obvious. But it is not always so expressed, as we shall presently see.

We quote again, briefly, from Professor Pickering, who says: "(Prof.) Turner has recently made a very interesting point, namely, that the fourth dimension, as actually treated by these mathematicians, is not time itself, but time multiplied by a constant: the velocity of light. Without at all affecting the astronomical proofs of Relativity, this simplifies our concep-

[4] "Gravitation, Time, and Einstein," *Popular Astronomy*, Dec., 1925.

tions enormously. Velocity is then distance divided by time, or as we say in English units, so many feet per second, and the fourth dimension may be expressed as time multiplied by velocity; that is to say, it is simply *distance,* just like the other three dimensions." [5]

Turning now to the printed edition of Einstein's Princeton Lecture on the *Meaning of Relativity,* we find these words as to the Lorentz transformation: "Before we analyze farther the conditions which define the Lorentz transformation, we shall introduce the light-time, L = Ct., in place of the time, t, in order that the *constant* 'C' shall not *enter explicitly* into the formulas to be developed later." [6] In connection with Professor Pickering's remarks, these words have a curious sound. But they are Einstein's own. Those, too, who have followed his equations at all will have noted that the presence of this constant 'C' is often rendered non-apparent by adopting it as unity, leaving us simply 'It' or 't' as a factor. There are still two remaining proofs claimed by Einstein in verification of his theory: namely, the bending of stellar rays in passing near the disk of the sun, as observed at the eclipse of 1919, and the shifting of spectral lines toward the red, said to have been attested by the spectrum of the dark companion of Sirius, this non-lustrous attendant being a peculiarly massive star and so able to induce this shift by its gravitational influence. As both these experimental proofs bear upon Einstein's gravitational views, they fall under the scope of his general theory and we may not discuss them here further than to say that astronomers differ as to their value.

In this brief outline of a few points most closely connected with Einstein's law of equivalence, it has been impossible even to touch upon many of its varied implications, in which the

[5] ***Physical Side of Relativity.*** **See Bird's Compilation of Einstein Essays, p. 298.**

[6] *Meaning of Relativity,* p. 34.

non-reality of translational motion, from an Einsteinian viewpoint, is more vividly set forth. Distance becomes transformed into a variable "separation interval", whose space-units grow shorter and time-units longer, according to the relative velocity of the observers. But the rejection of the reality of motion seems based upon or connected with an inability to enter into a conception of space. "What is meant by motion in space?" he asks. "In the first place, we entirely shun the vague word 'space', of which we must honestly acknowledge we cannot form the slightest conception, and we replace it by motion relative to a practically rigid body of reference." Again, we are told to "free ourselves from this fatal error", and speak only of "bodies of reference". As Einstein cannot conceive the rotation of the earth in "empty space", this rotation becomes either a relative one (whether as to sun or pendulum) or "constitutes mean acceleration with reference to the totality of the masses of the universe, rather than an acceleration with reference to absolute space",[7] or—for Einstein here offers us a third alternative—we may regard the earth's rotation as relative to a new form of ether, which is neither "homogeneous nor isotropic, but may be defined by ten gravitational potentials".[8] Under the general theory, to which these strictures on rotary motion really belong, Einstein's rejection of the reality of motion becomes even more evident: gravitation ceases to be a force and becomes a matter of structure: mathematical methods become more complicated and the Lorentz transformations are abandoned for the Gaussian co-ordinates. We pause on the threshold. But one thought persistently returns. Do the noumenal and physical factors of Einstein's theory form one consistent and indivisible whole, or are they in any way separable? As we have seen, many of the physical data of his system were built up by men who, for the most part,

[7] Einstein: *Sidelights on Relativity*, pp. 16-18.
[8] *Idem.*

knew not relativity. Moreover, it is the province of science to concern itself with the phenomena of a phenomenal world, their causes and effects, upon the assumption of their reality. Neither physics nor mathematics was formulated to handle noumena (even though logical relations may be expressed by symbolic equations, as in axiomatics). Would, then, Einstein's physical investigations fall to the ground with his metaphysics, should the results of the Michelson and Morley Experiment be reversed? It will be reserved perhaps for some future astronomer to answer this question since, even as we write, the possible detection of an "ether drift" is reported.

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DOES NATURAL REALISM BREAK DOWN?

PROFESSOR Sellars [1] concludes that it does after a searching critique of what the plain man believes. If we interpret natural realism in terms of the doctrine which holds that "physical things actually enter and leave consciousness" (*op. cit.* p. 44), and if natural realism is to be regarded as synonymous with what is generally spoken of as naïve realism (Professor Sellars views the two as synonymous—p. 57), then there are few thinkers who will not reject such a theory. I, for one, question the oft-repeated assertion that the plain man believes anything like the theory of naïve realism as it is customarily expounded. The truth seems to be that he has never constructed any theory whatsoever concerning knowledge, nor is he interested enough in the subject to attempt a theory concerning it. Be that as it may, philosophical tradition has canonized the practice of starting with the views of the man in the street, and this with the purpose either of demonstrating how hopelessly infantile such opinions are or of contrasting them with the more sophisticated products of critical philosophy.

Professor Sellars cannot accept common-sense theories because of the insuperable difficulties which they seem to involve. He does not reject, however, the fact of the existence of an extramental world. Given this fact, he sets out to develop a theory of knowledge "that will do justice to these realistic meanings and beliefs and yet not be open to the objections which proved fatal to natural realism." (pp. 56 and 57)

At this time I am not interested in the theory which Professor Sellars has elaborated to explain knowledge. I am much interested, however, in the starting point of his discussion. He would agree, as all thinkers agree, that as far as epistemology

[1] *Principles and Problems of Philosophy* (New York: Macmillan Co., 1926), pp. 43-58.

is concerned, the starting point is all-important. We must begin with facts, empirically obtained and tested. To begin with a theory, as so many epistemologists have done, is to involve one's self in heartbreaking difficulties and to end in black despair. Neither is it necessary to point out that a theory of knowledge adds nothing to a perceived fact. A theory of perception can well be regarded as a great aid toward a scientific classification of facts or as entailing a better description of them. The botanist's description of a violet gives us a better picture than that which the ordinary man possesses. But description, no matter how exact or profound, does not alter fact nor change its nature. Perception, too, has had a history but, as Laird points out, "it is hard to see why the history of perception should be allowed to correct or to supersede the description of it." [2]

Professor Sellars rejects natural realism for the reason that it "does not seem to me to understand the nature of perception nor does it seem to me able to account for illusions." (p. 57) All of this may be true, and Professor Sellars cites six serious objections to substantiate his conclusion, yet I question the advisability of approaching the problem of knowledge in this way. The reason for this statement is that such approach seems to involve, perhaps unconsciously, an unproven postulate, the truth of which is open to serious question. Moreover, to begin with a theory, not with an empiric fact, and Professor Sellars is firm in his resolution to be guided by facts only, is to go the way of idealism and eventually to arrive nowhere.

Must we approach the epistemological problem by assuming beforehand a sound theory of perception? The answer to this question depends on our answer to a prior question: Must we begin a study of knowledge by inquiring whether or not we directly perceive the external world? Those who reply affir-

[2] *A Study in Realism*, p. 16.

matively naturally feel called upon to attack immediately the problem of perception and to find an answer for the illusions of sense. My contention is that the question is illegitimate and literally reeks with unproven assumptions. Despite the fact that centuries have consecrated its use, the question must be rejected. In beginning this way philosophical tradition has created for us nothing less than a pseudo-problem from the meshes of which we have been trying to extricate ourselves since the days when Descartes left to the world his "luckless legacy" of extreme dualism.

No one questions the fact that perception is an intricate process nor that sense illusions entail numerous difficulties for a realistic theory of knowledge. But the intricacies of perception and the difficulties begotten by illusions are matters for psychology to investigate and pass judgment upon. The existence of such difficulties leads no farther than the conclusion that perception is a complex affair, and every psychologist affirms as much. They do not prove that the man in the street is wrong when he asserts he has seen a red book. It is with this simple fundamental fact of everyday experience that we, as epistemologists, must start and it is to this same fact that we must return as the final criterion for judging the truth or falsehood of any theory whatsoever about the fact. The fact itself may well bristle with difficulties when we approach it from a theoretical or an analytical angle. A thousand difficulties, however, do not make a doubt, for the reason that a sufficient answer may be given to all the difficulties brought against the universally accepted fact that the plain man sees a book which is external to his mind and is other than his percept of the book. What I am advocating is the simplest possible expression of the epistemological problem as the beginning point from which we are to proceed to the construction of any theory concerning it. To substitute psychological complexity for epistemological simplicity seems an altogether useless method

of procedure and can serve no good purpose. The epistemologist does not need to construct a psychology of sense perception before he can begin to work out a theory of knowledge. As a matter of fact, all such theorizing is additional baggage which cannot but make his journey the more trying and difficult.

At bottom the problem of knowledge is one of method, and with this conclusion Professor Sellars agrees. To my mind the sound method is not to begin with an analysis of perception and of the difficulties involved in perception, but with the datum on which all can agree with the plain man, namely, that when I perceive I perceive an object and not merely my own sensations. Analysis will show that this datum is complex, but any such conclusion due to reflexion upon the fact, is itself a theory, not a primitive datum. On the other hand, to throw into bold relief at the very outset of our inquiry the difficulties of perception is to obscure the fundamental fact of perception of a mind-independent world. By the same token we weaken the epistemological value of the sense datum and leave ourselves wide open to attack on the part of idealism, the best possible proof of which is that idealism has always proceeded along this path in its efforts to undermine belief in the reality of an external world. Again, it is a firm contention that the difficulties which Professor Sellars so adroitly masses against the views of the ordinary man are all capable of being solved. They should not, therefore, be so strongly emphasized or presented in such a way as to beget doubts as to the soundly empirical foundations upon which philosophical realism rests. One need not be concerned in this context with defending the views or theories, if such there be, of the ordinary man. What is given us in every perception of the external world is a " hard fact," against which the waves of doubt and of difficulty beat in vain. Critical realism in its efforts to be scientific concedes, and needlessly, too much to idealism and to physical science.

The point of this paper is that the lines of argumentation

advanced by Professor Sellars against natural realism are all capable of being answered. These solutions are outlined here, not so much with the idea of proving that the difficulties themselves are non-existent as to show that Professor Sellars is not justified in beginning the way he does. What I wish to say is that I do not object so much to his emphasizing the difficulties of sense perception as to his presentation of them as the beginning point for an analysis of knowledge. This procedure appears to be methodologically unsound. Logically, what we should expect to have presented first of all are the facts of knowledge, if such there be. The difficulties involved or consequent on the positions thus arrived at bring up the rear. They are merely the rough spots in the journey toward an acceptable solution of the problem of knowledge and are not our starting point. To view them otherwise than as difficulties is to throw the problem itself out of focus and ultimately to be conquered by, not to conquer, these objections.

Professor Sellars classifies the principal objections against natural realism under two headings—intra-organic and extra-organic—a distinction having its ground in the theory that "perception is an affair of the organism." (p. 122) The extra-organic difficulties arise from certain conditions in what we would call the external medium of perception, while the intra-organic are connected with or flow from perception itself viewed as a mental function. We will take up the extra-organic group of objections first.

Perception is complex, and as such presents many different and apparently conflicting sides to the student. The data of perception are no less complex, being visual, tactual, auditory, etc. Moreover, we do not merely see an object, we interpret its nature calling the complex data presented in every perception, a book, house, man. The data themselves are conditioned by the ever-changing conditions of the external world, of light,

heat, etc., or of the nervous mechanism, the eye, the conducting nerves, the brain centers. Every act of perception presents many and different characteristics depending on how one views it, as physicist, as physiologist, or as psychologist. If such be the facts, the content of any perceptual act can scarcely be explained by the simple assertion that the object which we perceive really possesses qualities capable of causing such a complex datum. In other words, perception as a process is so essentially relative, so much "a function of external and internal processes," that it is unthinkable that the ordinary man can be right when he insists that real objects are the source of his perception of the external world. As a matter of fact, the sense of externality which we possess, may it not be due not so much to the externality of objects as to the fact that, especially in visual sensations, "we feel outward-looking and adjust ourselves to the object which we are perceiving"? (p. 47)

Philosophers have always agreed on the essential relativity of the perceptual process. This only means that objects in order to be perceived must be actively taken up by the sense organs, themselves a part of the external world. The medium, therefore, in which objects exist, the medium through which their influence must pass in order to affect the sense organs, the peripheral sense organs, the cerebro-spinal system, are all factors making for complexity and relativity. For a book to be perceived, it must not only exist but must be seen by an eye. What color really is can be determined only by the physicist; certainly if neither colored objects nor the eye to perceive them existed, there would be no perception. This dependence of the datum on sense organs, which are themselves material, points only to the conclusion that perception is not an absolute function, not to the conclusion that the plain man is wrong when he claims that he sees a real book.

No realist would contend that redness is exclusively in the

book. The perceiver's organism has a great deal to do with the manner in which any particular red object will be perceived. Nor should we confuse the primitive datum presented to consciousness in perception with the spontaneous judgments which accompany practically every perception. The imagination, memory, and judgment background of our data also deeply influence a given perception, an analytical fact known to everyone and taken into account by everyone. Finally, the condition of the perceiver's organism at any moment affects one's perception to the extent that organic abnormality necessarily betrays us into error. However, even in these cases the datum really is as it appears to the particular perceiver's mind, though it most certainly is not so to the normal mind.

The data of perception, therefore, if viewed ontologically are the intrinsic qualities of things, not "merely data which arise in the percipient organism under certain conditions." To be perceived these data must be brought into relation with the perceiving mind. This means that the data must be made one cognitively with the perceiver; it need not mean that the data must be immanent to or totally dependent on the perceiver, nor that, because of the relativity of the perceptual process, what we really know are our own sensations. Moreover, that vision is accompanied by a feeling of externality cannot be denied. That this feeling explains objectivity is very much open to question. At any rate, whatever the theoretical value of this fact, it certainly affects the spontaneous judgment of otherness which we make on the occasion of practically every sensory stimulation.

Much is made of the distinction between the thing and its appearance. A straight stick appears bent if seen in the water from a certain angle, a landscape presents a multitude of appearances, depending on how we approach it. The query is: "Is one appearance more truly the appearance than another?" (p. 48) "Do I ever intuit anything but appearances?" (p. 49)

The answer to the difficulty is quite simple. Undoubtedly every object presents a number of appearances depending on the position from which it is viewed. The reason for this is that since perception is a mere awareness, it gives nothing beyond the appearances of things. Whether these appearances are the whole or only a part of the reality perceived depends on an ulterior act, that of judgment, which we readily make if there is any question about what the object is as presented to us. In case of doubt we have recourse to instruments in order to correct or amend an initial judgment. Only on the theory that perception must give us the real nature of an object can a difficulty arise when on reflection we begin to contrast the physical object with its appearances given in the perceptual datum. Of course, if perception is not perception but something else, it is easy to make impossible demands on it, just as it is easy, though not rationally justifiable, to expect to fly in an automobile because an automobile, like an aeroplane, possesses a gasoline motor. If, therefore, by "intuition" one means the act of perception viewed solely as an act of perception, we intuit only the appearances of objects, and each appearance is as truly an appearance as any other appearance. How such a statement of psychological fact involves difficulties for natural realism, I confess I cannot see.

A third objection from the extra-organic realm may be stated thus. Experience forces us to acknowledge basic variations in our perception of things. Now, "if anything X exhibits variations which are not shared by Y, X and Y must be distinct existences." (p. 49)

The conclusion does not follow unless one assumes that both X and Y are equally reals, not appearances, which it to assume the very point at issue. If the objection is to have weight, one must postulate that X viewed ontologically is from every angle the same X as viewed epistemologically and is moreover the whole, not a part of reality.

The distinction between accidental and substantial variations should be invoked in the solution of the objection under consideration. Thus, where accidental variations only are involved, the ontological reality, though not the epistemological reality, remains constant; that is to say, the object which exhibits a diversity of qualities due to differences in the perceptual medium or in the organs of sense, is always a unit, not perceivable by sensation but existing nevertheless and understandable in terms of judgment. If objects are not real but mere combinations of quality-groups, the difficulty we must admit becomes a real one. But in this case the difficulty is for critical not for natural realism, which latter theory does not deny the difference between substance and accident. As for the example given, of the star, whose light we now see which has been destroyed years ago, the difficulty is merely verbal. We do see a physical object, light; we conclude that it comes from a star as we reason to the further conclusion that the star had ceased to exist before its light reaches us.

The arguments of Professor Sellars when examined do not force one either to the conclusion that an external world does not exist or if it does that it cannot be perceived by us. They point to the fact that perception is complex and is influenced both by the object as it exists and by the intervening medium through which it must somehow pass before it becomes a sense datum, to the further fact that objects present many sides to the beholder, and to the conclusion that we cannot saddle perception with the work of intellect without doing violence to its real nature and making perception itself unintelligible. It is not necessary (as a matter of fact, it would be tiresome) to go again into the question of so-called sense illusions. Newton's disk, Aristotle's illusion, Locke's experiment, the Müller-Lyer illusion, Doppler's law, the paradoxes of resistance and of weight entail the consequence that for perception to be veridical all factors involved in the process must function normally, which

is only another way of saying that the sense organs must function with machine-like accuracy or our perceptions are likely to lead to false conclusions.

Finally, may we point out that even when a percept, not a judgment, may be described correctly as entailing error, the error is negative, never positive. Common-sense descriptions of the external world are superficial and hasty if compared with the elaborate picture of an object drawn by science. Though not perfect, sense data need not be false—a too common assumption on the part of many thinkers. To conclude with Professor Laird, "the physical things of common sense are not merely sense data or collections of them. They are *continuants* in time, and sense data are fleeting intermittent things. They preserve the same recognizable spatial contour for a considerable time. . . . Physical things, again, are supposed to have causal relations with other physical things. Soap dissolves in water, and it will stop a leak in a gas pipe. This language could scarcely be used of mere sense data." [3]

Professor Sellars next passes to the consideration of the intra-organic factors which affect perception.

The first argument he cites arises from the differences which are admitted to exist in the sense data of different individuals. Thus, the artist notes colors which the untrained person fails to perceive. In the case of color-blindness who is right concerning the color of an object, the normal or color-blind person? No one doubts that the individual's psychological history has a great deal to do with what he perceives or fails to perceive in a given object. Therefore, "if the datum of perception varies from individual to individual, how is it possible to select one datum as the intrinsic nature of the object?" (p. 51)

The plain man would be the last in the world to deny that there exist individual differences in perception; he would, at

[3] *A Study in Realism*, p. 27.

the same time, be the last to accept the conclusion which Professor Sellars draws from this well-known fact. The scientist often speaks as if the sense data he studies are uninfluenced by subjective factors but everyone knows that this is a mere manner of speaking since viewpoints, purposes, and the necessities of scientific theory deeply influence perception of even the most rigorously controlled facts. If this be true of the scientific approach, how much more so is it of our everyday manner of perceiving objects. This fact of experience, however, does not involve us in contradictions nor need we conclude from it that it is not things which we perceive but a mere appearance produced by the thing, from which we infer that the object really possesses all the characteristics of the mental image. There may and do exist contradictions in our perceptions. Moreover, it is extremely difficult at times to harmonize sense-data. But if we are careful to note that in cases of seeming conflict it is not the reality itself but the sense data which contradict one another, and if, in the second place, we make the distinctions called for by such fact, anything like permanent deception is quite unnecessary. Thus, in the case of color-blindness, it is not as a matter of fact the *same* object which is perceived by the normal and the color-blind persons. The subjective handicaps of the color-blind person explain his erroneous judgments concerning the color of objects. In the case of controversy as to who is right, appeal can be made to objective standards and to scientific instruments whose accuracy everyone must accept. Any interpretation of objects perceived, therefore, must always take into account the intra-organic factors involved in perception. When such factors are given due weight and consideration the appearances of objects never deceive us since we do not declare an object *to be* something which it is not in reality, but merely declare that it *appears* to be something, assuming always that the act itself of perception is in every way normal.

Any perceiver is likely to make contradictory predications concerning an object, but he well appreciates that only *one* of these contradictories can be true of the object as it exists outside himself, and that, therefore, the contradiction is a result of abnormal conditions, extra-organic or intra-organic, over which he may have no control, but which he must take into consideration in determining which perception truly represents the object as it exists really and external to his mind.

The questions of what reality is and how it is possible to know a given reality are quite beside the point. Nor should any theory we may hold thereon influence us to the extent that, in the face of Professor Sellars' difficulty, we would be prepared to surrender belief in an external world. The very contrary, as a matter of fact, is true. For Professor Sellars, in the objection under analysis, has been guilty of what Professor Turner calls the " epistemologists' fallacy," that is to say, there has been given " to the naïve realists' distinction a theoretical interpretation of his own, and he has then, altogether unjustifiably, read this speculative interpretation backwards into naïve experience. This procedure, however, is wholly unwarranted." [4] On the other hand, it should be emphasized that variations in individual perceptions are relatively few when compared with the great number of similarities which characterize the perceptions of normal persons, whether these be viewed as the perceptions of one person or the like perceptions of many individuals. To which might be added that other well-known psychological observation that our senses mutually confirm the deliverances of one another, a fact clearly evidenced in the deliverances of senses so radically different from each other as sight and touch.

Again, memory is supposed to present insurmountable diffi-

[4] J. E. Turner, *A Theory of Direct Realism*, p. 75. Cf. the classification of appearances which Turner makes, *op. cit.* pp. 77 et seq.

culties for the theory of natural realism, for how shall we account for our memory of an object "when it is no longer present or even existent"? (p. 51) "The similarity between the datum of perception and the datum of memory suggests that both are internal and are somehow bound up with the individual who is perceiving and remembering." (p. 52)

The above objection is one which idealism has put forward in varying ways almost since the beginnings of philosophy. Over and above its assumption that the idea or sense datum must be immanent and cannot be in any sense of the word extrament, it involves a confusion of thought concerning the nature of the mental relation in the act itself of perception. Every datum when perceived is taken up into the mind and becomes mental. Manifestly, perception is impossible where the datum cannot be taken up into the mind and made one with it by the mental act for nothing can be perceived until it is brought into cognitive relations with the perceiver. Assuming, however, that an object is related to a perceiving mind does not change the reality of the object, but only our perception of it. In a word, every datum must be looked upon as both internal and external; internal since it is an act of perception, external because it is an object. A datum need not be exclusively either internal or external, but may at one and the same time be both.

Perception, it is true, is independent of reality in a certain sense, as the external world is, from its side, independent of perception. Yet they can be and are related to each other as two independent things. Independence does not equal unrelatedness, otherwise nothing at all could possibly be known by anyone. When Professor Sellars, therefore, writes that the datum of perception and the datum of memory are similar and internal, we quite agree with him if by similarity he refers to mental similarity, and to their essential immanence. All this is, of course, mere platitude for it is only another way of saying that perception and memory are mental acts.

We disagree, however, if by this statement he wishes us to conclude that the object to which the perceptual or memory datum refers is non-existent, or that natural realism finds itself in a tight place trying to explain how it can remember anything at all. The problem of *how* we remember is as unanswerable as that other question, how we perceive objects outside ourselves. The question of why we remember like the question why we perceive is so ultimate and unanalyzable that the plain man is to be congratulated, in my humble opinion, when he accepts the facts and does not even make the attempt "to think the new tendency through into a stable and satisfactory outlook." (p. 52)

The final difficulty of Professor Sellars has to do with the interpretative and constructive features of perception, from which he concludes that "*what* we see is in some sense a construct expressing stimulation and complicated response. *And yet we all believe that we see an independent object.*" (p. 54) The answer is not complex. In *some* sense the percept is a construct in which interpretation plays an important part, but is not in every sense a construct divorced from external reality as Professor Sellars wishes us to conclude. This well-known psychological fact points only to the complexity of perceptual experience. It proves that the man in the street is not a psychologist, not that he is wrong when he believes he beholds an independent object. Nor is the plain man quite so naïve as is generally supposed. He well appreciates that many of his perceptual constructs are interpretations and even inferences based on concrete percepts. He is able, however, to distinguish between an interpretation and a falsification of experience. It is daily experience which accustoms him to allow in his perceptions for such effects as are produced by distance, perspective, artifical and abnormal conditions in the sense medium and in the organs themselves of perception.

Critical realism is on the right track when it rejects the dualism of Descartes and asserts that an existential foundation for cognition must be acknowledged. The existent which we must accept, however, is external to cognition itself; it cannot be a mere logical entity or a projection outside the mind of what goes on in the mind. The belief of natural realism which instinctively distinguishes between the content as externally real and the content as sensed has real value and must be maintained if perception is to bring to us a real knowledge of reality. By calling into question this primary and far-reaching distinction the critical realist fails to do justice to experience and, at the same time, makes it very difficult to preserve those realistic meanings which he finds indissolubly bound up with natural realism. Might it not be the part of philosophical prudence to begin with the beliefs of the plain man, which appear to be so natural and logical, to accept them as a foundation upon which to construct a critical philosophy of knowledge, and to hope thereby to reach a theory which, while it respects the universal and instinctive beliefs of mankind, will not fail to take into consideration all the psychological and epistemological difficulties which accompany such beliefs? Such to my mind is the obvious manner of proceeding. Perhaps its very obviousness is an argument against its use.

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CHRONICLE

LA PHILOSOPHIE EN BELGIQUE EN 1926

LA pensée philosophique peut se manifester en des écrits techniques, à l'usage du public spécialisé, et en des publications moins réservées, atteignant des lecteurs plus nombreux et propageant dans des milieux étendus et divers les grands courants des systèmes. Mais toujours les écrits dépendent à la fois des maîtres qui souvent les ont d'abord professés avant de les imprimer, et du public auquel ils s'adressent. Pour donner un aperçu de la philosophie en Belgique en 1926, nous voudrions indiquer les tendances générales, le cadre dans lequel elles se produisent, avant de replacer dans ce milieu les publications courantes et parfois celles des années immédiatement antérieures qui peuvent éclairer notre description.

Les amateurs de philosophie pure, technique, sont forcément rares, surtout dans les durs temps actuels, en-dehors de ceux qui s'y sont voués par orientation professionnelle. Par sa nature même, la philosophie est moins susceptible d'attirer pour une étude approfondie un aussi grand nombre d'esprits que l'histoire, par exemple, qui a toujours joui chez nous d'une faveur marquée. Outre que cette science trouve facilement accès auprès du grand public, le nombre des historiens spécialisés, ou du moins des personnes formées aux disciplines historiques, est nécessairement considérable; il faut y ranger les archivistes et les professeurs d'enseignement secondaire, préparés par une solide culture philologique; or les collèges d'humanités abondent en Belgique. Par contre, la philosophie, chez nous, n'est pas au programme de ces établissements. La logique, la psychologie et la morale figurent obligatoirement parmi les branches enseignées durant les deux premières années d'université, dans les "candidatures" préparatoires aux doctorats des diverses facultés et, par suite, aux carrières libérales. Tous en reçoivent donc une certaine initiation, incomplète d'ailleurs. Mais les spécialistes sont rares et n'ont pas souvent l'occasion de continuer leurs études proprement philosophiques; pratiquement, ils doivent utiliser leurs connaissances pour l'enseignement d'autres matières, ou se contenter de faire bénéficier de leur culture générale approfondie leurs autres occupations professionnelles.

En-dehors des chaires universitaires, les professeurs de philosophie en Belgique se trouvent à peu près exclusivement dans les séminaires

diocésains et dans les scolasticats des ordres religieux. Parmi ces derniers, le grand collège de la Compagnie de Jésus à Louvain s'est acquis une notoriété méritée. Ajoutons encore que les théologiens, outre qu'ils ont généralement reçu une formation philosophique assez approfondie, doivent, de par la nature même de leurs travaux, rester en contact étroit avec la philosophie.[1]

Dans ces milieux, c'est la philosophie scolastique qui est en honneur. Mais son prestige est considérable aussi dans les universités. Celle de Louvain possède de loin l'enseignement le plus complet en la matière. Ce fut, on le sait, de longues années durant, l'oeuvre de Mgr Mercier, d'y organiser, à côté des cours élémentaires habituels, tout un groupe de chaires, l'Institut supérieur de philosophie, en vue d'une étude approfondie de cette science et des disciplines connexes; inutile de rappeler que c'est l'esprit de saint Thomas qui inspirait cette entreprise. Louvain est la seule université belge qui forme tous les ans un nombre appréciable de docteurs en philosophie, belges ou étrangers. Elle a fourni plusieurs professeurs de cette branche aux universités d'Etat de Gand et de Liège.[2]

Outre les élèves qui suivent le cycle complet des cours, nombre d'étudiants de diverses facultés viennent à l'école de Louvain chercher un complément sérieux de culture philosophique. Ils veulent une connaissance plus sérieuse que le minimum ordinaire, sans aller jusqu'à la spécialisation. Ce goût éclairé de la philosophie se répand largement depuis quelques années surtout. Ainsi on a créé à l'Institut St Louis à Bruxelles une organisation destinée à mettre à la portée des étudiants et même du grand public de sérieuses notions de philosophie et de théologie. Cette institution, qui a pris le nom d'Ecole des sciences religieuses, a vu les auditeurs affluer à ses cours, répartis sur trois années. Elle est l'oeuvre d'un ancien élève de l'Ecole de Louvain, M.

[1] Aussi trouve-t-on des articles concernant la philosophie dans les revues théologiques, en particulier dans les *Ephemerides theologicae lovanienses*. —Nous ne pouvons évidemment pas dans cet article énumérer les études parues dans les périodiques; nous ne ferons à cette règle que de rares exceptions. Remarquons que le seul organe belge uniquement consacré à la philosophie est la *Revue néo-scolastique de philosophie*, de Louvain.

[2] Deux établissements, l'Institut St. Louis à Bruxelles, dépendant de l'autorité diocésaine, et le Collège Notre-Dame de la Paix à Namur, dirigé par les Jésuites, possèdent, outre les cours d'humanités, des facultés partielles d'enseignement supérieur, où se font donc des cours de philosophie; c'est aussi le thomisme qui y est professé.

Jacques Leclercq, aidé de quelques collègues, également docteurs du même Institut. Cela dit assez l'orientation de ces cours. Différents instituts d'éducation supérieure féminine, à Bruxelles et en province, font aussi une part plus ou moins large à la philosophie, toujours dans le même esprit. Enfin les "Ecoles normales sociales catholiques" s'inspirent de ces doctrines, appliquées à leur objet propre.[3]

Dans ces conditions, on ne peut s'attendre à voir notre bibliographie aligner beaucoup de titres, surtout en comparaison des grands pays voisins. Elle comprend cependant un ensemble intéressant, où émergent quelques oeuvres d'un grand intérêt.

La métaphysique, entendue comme science fondamentale de l'être et de la connaissance, restera toujours l'essence de la philosophie. Notre temps voit un peu partout une réaction contre cette négation de la philosophie que furent le positivisme et certain criticisme étroit. Depuis plusieurs années la métaphysique pure revient à l'honneur à l'université de Bruxelles. M. Paul De Coster est un vrai métaphysicien. Son style assez tendu et abstrus exige du lecteur un sérieux effort, mais il apprend à poursuivre sans relâche le point de vue vraiment central de sa science. Son étude historique sur la dialectique spinoziste,[4] non moins que ses livres personnels [5] montrent que le grand philosophe panthéiste est un de ses maîtres préférés; il faut évidemment y ajouter Hegel et noter une influence considérable de Bergson. M. De Coster cherche l'unité de la pensée et de la vie dans un idéalisme objectif qui ne reste pas simplement logique, mais qui tend vers l'action spirituelle et morale et vers l'intuition mystique. Tous ses écrits veulent ramener la pensée à la saisie pleine d'elle-même dans sa pureté, à l'élan qui la porte au bout de toutes ses capacités, à travers tous les risques. C'est bien, en somme, une manifestation de la métaphysique romantique.

M. De Coster est trop métaphysicien pour méconnaître la valeur des doctrines scolastiques qui répondent à ses préoccupations. Les travaux de M. le professeur Balthasar de Louvain pourront l'aider mieux que d'autres à s'éclairer à leur sujet. Le souci qui les caractérise est de

[3] A cet enseignement correspondent aussi des publications de vulgarisation comme la collection *Etudes religieuses*, paraissant à Liège, et dont certaines brochures traitent excellemment de matières philosophiques.

[4] "Quelques aspects de la dialectique spinoziste," extrait du *Chronicon spinozianum*, 1923.

[5] *La réforme de la conscience* (Bruxelles: Lamertin, 1919); *Le règne de la conscience* (Bruxelles: Lamertin, 1922).

montrer comment tous les problèmes de la métaphysique sont contenus dans la notion d'être et y trouvent aussi leur solution, comment surtout cette notion analogique ne s'épuise pas dans le fini, le relatif, mais impose de remonter à l'Absolu, à l'Infini.[6]

On voudrait pouvoir signaler la bibliographie d'un maître dont l'action a été considérable dans son milieu, mais qui ne s'est guère résigné à mettre son enseignement à la portée d'un public plus étendu. Profitons de la publication des "Notes de métaphysique" qu'il a fait paraître discrètement dans une revue non spécialement consacrée à la philosophie,[7] pour y attirer l'attention. Le R. P. Scheuer, S.J., professeur au collège philosophique et théologique de Louvain, maintient fermement les exigences d'une méthode rigoureuse et le caractère spécifique de la métaphysique.

Le cinquième volume du grand ouvrage du R. P. Maréchal, S.J., sur *Le point de départ de la métaphysique*[8] est assurément le travail le plus important paru l'an dernier dans notre pays. L'auteur, on le sait, étudie le problème critique avant tout comme le problème de la légitimité de l'affirmation absolue et, partant, de la métaphysique. On connaît sa méthode. Dans des cadres à la fois historiques et théoriques, il passe en revue les grands systèmes qui, de l'antiquité à nos jours, ont voulu répondre à cette question capitale. Pas d'érudition encombrante ni d'histoire pure, mais une pensée forte et très informée; pas de recensement complet des opinions, mais un choix des doctrines qui représentent les alternatives essentielles de l'esprit humain en face du problème. Le développement, parfois un peu touffu, exige certes une attention soutenue, mais on ne peut reprocher à l'auteur de trop demander au lecteur. Son souci est de transposer la doctrine scolastique en termes et en pensées modernes, de manière à la rendre assimilable aux esprits actuels, sans rien en sacrifier. Certains seront peut-être étonnés de trouver sous ce vêtement nouveau la doctrine de saint Thomas, débarrassée même de tout mélange de suarézianisme.

Le V^e^ volume contient la preuve méthodique de la thèse et la comparaison du thomisme avec le criticisme kantien. Non content d'exposer

[6] Voir en particulier son dernier travail d'ensemble: "L'abstraction et l'analogie de l'être," extrait des *Miscellània Tomista publicada per Estudis franciscans de Barcelona*, XXIV (1924).

[7] *Nouvelle revue théologique*, LIII (1926), 329 ss., 451 ss.

[8] Louvain: Éditions du *Museum Lessianum*; et Paris: Alcan, 1926. Les trois premiers volumes ou "cahiers" ont paru en 1922 et 1923.

la critique "métaphysique" des anciens, prise du côté de l'objet, l'auteur montre comment elle se vérifie encore en adoptant le point de vue du sujet. En somme, il se place au point de vue de la critique transcendantale kantienne, n'en repoussant que les étroitesses. Examinant la connaissance en elle-même, on retrouve les mêmes exigences que dans l'objet, on voit comment les éléments représentatifs sont en nous et comment l'affirmation, caractéristique du mode humain de connaître, ne peut se restreindre à l'objet purement immanent. Exprimant toute la finalité de notre intelligence, elle nous emporte toujours dans le transcendant. En dernière analyse, elle s'appuie sur l'existence même de Dieu, impliqué comme terme de tout le mouvement de l'esprit. Le phénoménisme kantien est dépassé, la nature et les exigences de l'évidence objective sont tirées au clair par la réflexion.

Ce livre extrêmement riche ne peut être résumé. Essai d'adaptation ingénieuse et hardie de la doctrine traditionnelle aux besoins actuels, il ne peut manquer d'alimenter les discussions sur la connaissance et l'être.

A côté de cette oeuvre imposante, le petit livre que M. Noël intitule modestement *Notes d'épistémologie thomiste*[9] pourrait paraître un peu mince. Qu'on y prenne garde cependant. Ce recueil d'études qui s'étendent sur une période de plusieurs années manifeste une pensée mûrie et cohérente; la limpidité élégante du style, la facilité de l'exposé ne révèlent qu'aux lecteurs attentifs et avertis la densité de la substance. C'est toute l'esquisse, déjà très poussée, d'un traité complet d'épistémologie. Espérons que l'auteur développera prochainement son thème. Il se place au point de vue strictement épistémologique pour dissiper les contradictions et les obscurités que la critique croit souvent découvrir dans l'idée même d'une connaissance transcendante. Le réel se révèle immédiatement présent à l'esprit, quoique de façon diverse. Le rôle de la critique est de comparer ces manifestations diverses de l'objet et de les réduire, tandis que celui de la métaphysique sera, en l'espèce, d'expliquer les relations ontologiques de l'esprit, substance spirituelle réelle, et de la chose.

L'esthétique touche à la fois à la psychologie et à la métaphysique. On le remarque dans l'étude qu'a publiée M. Henri-Ed. Pirenne, professeur à l'université de Gand et fils de l'historien bien connu.[10] "Beau,

[9] Louvain: Institut supérieur de philosophie; et Paris: Alcan, 1925.

[10] *Essai sur le beau* (Gand: Van Rysselberghe; et Paris: Champion, 1924).

dit-il, c'est un des noms du bien. Et le bien, c'est le vrai qu'on aime." [11] Les analyses de l'auteur, exprimées dans une forme un peu précieuse, l'amènent à une conception relativiste et humaniste des trois transcendentaux et de l'univers.

La psychologie rationelle n'a donné lieu à aucun travail d'ensemble. Le R. P. Maréchal a réuni une première série d'importantes études de psychologie religieuse, déjà parues antérieurement dans divers recueils [12] et il en a publié d'autres non moins importants depuis.[13] Tous ces mémoires touchent entre autres à des questions essentielles de méthode. Il n'entre pas dans nos limites de parler de la psychologie expérimentale et de ses applications à l'éducation, où l'université de Bruxelles et plus récemment celle de Louvain ont travaillé méthodiquement.[14] M. Dwelshauwers, appelé récemment à faire le cours de psychologie expérimentale à l'Institut catholique de Paris, a fait paraître un livre sur *Les mécanismes subconscients* [15] où il manifeste nettement ses préférences pour l'animisme aristotélicien et thomiste.

M. Edgar Janssens, professeur à l'université de Liège, a publié sur la morale générale un ouvrage considérable, plus encore par sa plénitude de pensée, sa rigueur de méthode et sa clarté d'exposition que par son étendue.[16] Il approfondit les questions classiques de son sujet en s'inspirant fidèlement de la doctrine aristotélicienne et thomiste, mais non sans un véritable effort de réflexion personnelle, ni sans comparaison soutenue avec les théories récentes; comme l'exigeait l'esprit de ses maîtres, l'analyses psychologique et logique des faits concrets est toujours à la base de ses démonstrations. Cependant l'auteur se rend bien compte qu'il n'a pas écrit un livre facile; mais il revendique justement le droit d'exiger que ses lecteurs fassent avec lui un effort pour

[11] *Op. cit.*, p. 146.

[12] *Etudes sur la psychologie des mystiques* (Bruges: Bayaert; et Paris: Alcan, 1924), I.

[13] Citons au moins: "Réflexions sur l'étude comparée des mysticismes," *Revue des questions scientifiques*, XC (1926), 81 ss., 353 ss.

[14] Le Dr. G. Vermeylen, de l'université de Bruxelles, vient de publier un résumé clair et objectif de *La psychologie de l'enfant et de l'adolescent* (Bruxelles: Lamertin, 1926). MM. A. De Coene et F. De Hovre, docteurs en philosophie de Louvain, dirigent la remarquable revue de pédagogie rédigée en néerlandais: *Vlaamsch opvoedkundig tijdschrift.*

[15] Paris: Alcan, 1925.

[16] *Cours de morale générale*, 2 vol. (Louvain; Institut supérieur de philosophie, 1926).

saisir ses raisons et les apprécier. Il serait regrettable que la forme un peu schématique masquât aux yeux de certains la substance vivante de ce livre; il demeure une des meilleures sources d'information sur la pensée thomiste en morale. Les lecteurs informés remarqueront les explications de l'auteur sur la raison, norme de la moralité et sa discussion—parfois contestable, mais personnelle—des systèmes relatifs à la conscience douteuse.

Le livre de M. Janssens sera heureusement complété par le grand traité de droit naturel que M. J. Leclercq a commencé à publier à la fin de l'année dernière.[17] La méthode qu'il suit est assez différente. M. Leclercq tient à être accessible au lecteur non prévenu, il se met à la portée de l'étudiant et se montre secourable à ses ignorances. Il évite les termes techniques, aime l'exposé direct et personnel, et ne craint ni les légers paradoxes et les opinions originales, ni l'aveu des difficultés. Son livre tient largement compte des théories modernes et leur oppose, sans polémique déplacée, mais dans une discussion sereine, la doctrine scolastique, dont il fait ressortir l'originalité et le bien-fondé.

La philosophie scolastique fait évidemment sentir son influence dans l'étude des questions sociales. Les ouvrages du R. P. Fallon, S. J. sont un remarquable exemple des ressources qu'elle offre pour la solution de problèmes comme ceux de la valeur, du juste prix, de la propriété, du salaire.[18]

A l'université de Bruxelles, la sociologie objective est un des sujets de recherches de l'Institut Solvay. L'esprit qui domine dans ces milieux est celui du positivisme et de l'école sociologique française. Toutefois, M. E. Dupréel, qui est attaché à cette fondation, a publié une intéressante critique de l'optimisme progressiste, cher au XIX^{e} siècle;[19] il y déploie ses qualités d'analyste perspicace et ingénieux.

Les problèmes économiques, nous venons de le rappeler, présentent un aspect réellement philosophique. Ainsi les théories socialistes, par leur matérialisme historique et par leur attitude vis-à-vis de

[17] *Leçons de droit naturel* (Louvain: éditions de la Société d'études morales, sociales et juridiques; et Paris: Giraudon, 1926), I: *Le fondement du droit et de la société.*

[18] Voir *Principes d'économie sociale* (3^{e} éd., Louvain: *Museum Lessianum;* Paris: Alcan, 1924) et *Sommaire des principes d'économie sociale* (Louvain: Société d'études morales, sociales et juridiques; et Paris: Giraudon, 1926).

[19] "La valeur du progrès," extrait de la *Revue de l'institut de sociologie,* VI (1925-1926).

la religion, atteignent en réalité aux questions les plus vitales. Cet aspect, souvent touché dans les polémiques, n'a pourtant pas été l'objet d'un travail scientifique approfondi dans ces derniers temps.[20] Un petit livre de M. R. L. Levêque manifeste cependant des tendances philosophiques. Cet *Essai d'une critique des théories socialistes et de l'économie capitaliste*[21] se place au point de vue même du matérialisme historique; il fait la critique du socialisme et du capitalisme, des théories prolétariennes et bourgeoises, en les ramenant aux tendances générales de la masse d'une part et de l'individualisme de l'autre. Ce petit livre contient un bon nombre de remarques pertinentes; il dépend pour une bonne part de Nietzsche et de Georges Sorel.

Quant à l'histoire de la philosophie, nous ne devons pas faire connaître au lecteur la réédition du grand ouvrage de M. De Wulf.[22] Il a reçu un complément important, non seulement sur la personnalité et les oeuvres d'un penseur distingué, mais sur tout le mouvement philosophique et théologique du XIII[e] siècle finissant. Nous voulons parler du beau livre du R. P. Hocedez, S. J. sur *Richard de Middleton, sa vie, ses oeuvres, sa doctrine.*[23]

Dom Odon Lottin, O.S.B., a publié dans la *Revue néo-scolastique de philosophie* et dans les *Ephemerides theologicae lovanienses* des recherches importantes sur l'histoire des questions de morale et de droit naturel au Moyen-Age. Les dernières seules ont paru en volume.[24]

Enfin, au point de vue historique, on ne pourra négliger les pénétrantes études du P. Maréchal dans son grand ouvrage cité plus haut.

RÉNÉ KREMER.

Louvain.

[20] Signalons toutefois l'étude de M. D. J. Blume, *Christianisme et socialisme* (Bruxelles: L'Eglantine, 1926), qui s'inspire d'une conception agnostique de la religion.

[21] Bruxelles: éd. du *Moniteur des intérêts matériels*, 1926.

[22] *Histoire de la philosophie médiévale* (5[e] éd., Louvain: Institut supérieur de philosophie; et Paris: Alcan, 1924-1925), 2 vol.

[23] Louvain: Spicilegium sacrum lovaniense; et Paris: Champion, 1925. En réalité l'ouvrage a paru en 1926.

[24] *Le droit naturel chez saint Thomas et ses prédécesseurs, commentaire historique de la 1a 2ae, q. 94* (Bruges: Beyaert, 1926).

BOOK REVIEWS

Plato, the Man and His Work. By ALFRED EDWARD TAYLOR. New York: Lincoln MacVeigh, The Dial Press, Inc., 1927. Pp. 522.

It would be impossible to give an adequate idea of the value of this book in the brief notice that is proper to a review of this kind. But some idea of its importance may be gained from the consideration that within the last fifty years the higher critics in the field of Platonic research have shown unusual interest in the development of Plato's thought, and have run counter, time and again, to the current views of Socrates and Plato, and to many other points of chronology and genuineness of items in the Platonic *corpus.* Until there was some authoritative statement and agreement on these points among the most mature students engaged in this study, it was exceedingly difficult to decide what was Plato's teaching on any part of his philosophy. For example, the publication in 1911 of Professor A. E. Taylor's *Varia Socratica, First Series,* and of Professor J. Burnet's Introduction to his edition of the *Phaedo* obliged all students of Plato to reconsider their position. These two students hold that neither Xenophon nor Aristotle knew much about Socrates except what they had learned through Plato and his school. Therefore the works of Plato are practically the only source of our knowledge of Socrates. Professor Taylor, moreover, holds that the picture of Socrates found in the Platonic writings, coincides even in detail, with the caricature of him found in the play of Aristophanes, *The Clouds,* which was written when Plato was a baby; and Professor Burnet thinks that Plato's original opinions are only to be found in those dialogues attributed to his later period, in which Plato criticizes doctrines upheld in his other works, commonly supposed to be of earlier date. So this book may be expected to summarize the findings of many years of Platonic research, and, coming as it does from one who has been intimately connected with all controversies in this field, it should give authoritative views on the whole of Plato's work.

Little need be said of the first chapter which is a sketch of Plato's life. The author is doubtful about a great deal of the material on this subject supplied by Olympiodorus and Diogenes, and discounts the view that Plato became a disciple of Socrates at the age of eighteen or twenty. Evidence supplied by the seventh epistle rather

indicates that Plato's acquaintance with Socrates went back as far as he could remember. He was a young friend and admirer rather than a disciple, and it was not until he was aroused by the execution of Socrates that he determined to devote his life to philosophy.

The author speaks with conviction on another point in Plato's life that is perhaps worthy of notice. In an article "A Philosopher attempts to Reform a State" (*Hibbert Journal,* XXIV, April, 1926) Mr. L. A. Post states the current notion that Plato undertook the task of educating the young Dionysius to make effective in practice his philosophic conception of an ideal state. As to this view Professor Taylor says:

> Plato's object was not, as has been fancied, the ridiculous one of setting up in the most luxurious of Greek cities a pinchbeck imitation of the imaginary city of the *Republic.* It was the practical and statesman-like object of trying to fit the young Dionysius for the immediate practical duty of checking the Carthaginians and, if possible, of expelling them from Sicily, by making Syracuse the centre of a strong constitutional monarchy to embrace the whole body of Greek communities in the west of the island. (p. 7)

The second chapter begins with a critique on the authenticity of Platonic writings, and briefly considers the evidence for and against accepting such doubtfully genuine articles as *Alcibiades I, Ion, Menexenus, Hippias Major, Epinomis,* and *Epistles,* into the accepted canon of Plato. The arguments are very interesting and convincing.

The author now insists that it is impossible to understand Plato or indeed any other great thinker without a knowledge of the relative order of his works and of the actual period to which they belong. Some trustworthy indication of the order in which Plato's works, or at least the most important of them were written, must be found. Moreover, for a more complete understanding we need to know whether the most important dialogues were written in early manhood, in mid-life, or in old age, and again whether there are any gaps in Plato's literary activity. The discussion of such questions occupies the latter part of this chapter.

Before proceeding to his analysis of the dialogues which occupies the major portion of the book, Professor Taylor makes some interesting introductory observations that he considers necessary to a proper appreciation, not only of the dialogues, but of Plato's work as a whole. Plato has made it quite clear to us in several of his epistles that he

took no great interest in "system making." Indeed it is very unlikely that, even at the end of his long life of eighty years, he fancied himself to have worked out anything like a coherent "theory of everything." If there ever was a Platonic "system" at least Plato did not choose to commit it to writing.

Epistle, vii. 341c: "There does not exist, and there never shall, any treatise by myself on these matters. The subject does not admit, as the sciences do, of exposition." This is one of the main reasons why it would be almost impossible to construct a textbook containing a precise résumé of Platonic philosophy. So it is by no means easy for us at the present day to interpret what might be called the central theme of Plato's philosophy. What makes matters worse is that we depend almost entirely on what Aristotle tells us, and we know him to have been a very unsympathetic critic of Plato's teaching. Professor Burnet says that Aristotle looked at it too much in the light of the results to which it led in the Academy in his own day.

Other difficulties are created by the fact that Plato, like Shakespeare, had a marvelous gift of suppressing his own personality when engaged in dramatic composition. That is why his personality is so illusive, and why that of Socrates has so often been substituted for it. Socrates is present as one of the speakers in all the dialogues except the *Laws,* and in all except those which are generally regarded as having been written in late life, the personality of Socrates dominates the whole dialogue. In all these earlier works, then, Plato's main object is to immortalize his old master by leaving to the world a faithful and living portrait of him. Many have held that Plato used the personality of Socrates for expressing all kinds of theories invented by himself. But even those who credit Plato with doing this commonly admit that some of the views ascribed to Socrates in the dialogues are those of the actual Socrates. A principle which would provide a means of distinguishing those sayings of Socrates, which truly represent the views of Plato, from those that do not, is very difficult to find. A further difficulty arises from the fact that in nearly all the dialogues except the shortest, the conversation wanders over a wide field of topics. To put under one head all that Plato has to say anywhere about education or any other topic, would be to run the risk of confusing views that he may have received from a predecessor, and those that were the fruits of his own mature personal thought.

Thus it would be rash to confound in one amalgam utterances about

early education taken from the *Republic,* written probably before Plato was forty and at any rate *possibly* more Socratic than Platonic, with others taken from the Laws, the *magnum opus* of Plato's old age, where there is no Socrates in question to cause any difficulty. A work on Platonic philosophy composed on these principles is certain to obliterate every trace of the development of Plato's thought. (p. 25)

These difficulties encountered in the study of Plato, along with the impossibility of confining the almost infinite variety and suggestiveness of Plato's thoughts in the framework of any system either of philosophy or of exposition determine Professor TAYLOR to offer an analysis of the different dialogues *seriatim.* To Plato philosophy meant a life spent in the "active personal pursuit of truth and goodness by the light of one or two great passionate personal convictions"; the dialogues will tell us something of these "fundamental life-long convictions."

In grouping the dialogues Professor TAYLOR is in agreement with those in the past who distinguished a Socratic period, in which the views of Socrates are assumed to dominate but in which Plato may also be expressing some of his own theories, and a later period in which Plato is expounding his own original views. He makes a new point, however, by including in the first period all items written down to and including the *Republic.* This period he convincingly shows began not before the death of Socrates, and continued down to Plato's forty-first year and the founding of the Academy. Such an arrangement credits Socrates with the Theory of Forms expounded in the *Meno,* in the *Phaedo* and in the *Republic.* It is in the last four dialogues of this period, the *Phaedo, Symposium, Protagoras* and *Republic,* that Plato manifests his greatest maturity as a dramatic artist. "The composition of five such works as the *Sophistes, Politicus, Timaeus, Philebus, Laws,*" he thinks, "is a notable achievement for any man between the ages of sixty-seven and eighty-one." He insists that the current view found in the textbooks that "relegates this last stage in the development of Plato's thought to a 'senile' year or two subsequent to the close of Plato's activity as a writer" is an entire misconception.

With regard to the detailed treatment of the individual dialogues anything approaching a survey is quite out of the question. The work abounds in striking allusions and interesting parallels made to doctrines of all kinds. Only a few points that are especially interesting or unusual can be given any attention.

The commentaries on the earlier and shorter dialogues, on which there has been very little done in the English language, will be gratefully received by teachers and students alike. Commenting on the familiar ethical paradox that is the theme of the *Lesser Hippias,* "that the man who does wrong on purpose, if there is such a person, is better than the man who does wrong unintentionally," Professor TAYLOR makes some interesting remarks. He insists that the key to the meaning of this saying is to be sought in the clause, "if there is such a person." In view of the doctrine that virtue is knowledge, and the famous Socratic dictum repeated by Plato in the *Laws,* "that all wrong-doing is involuntary," the inference that Plato wishes us to formulate is that the paradox does not arise, simply because there is no such person. In Plato the voluntary means what we truly wish to have. Now no man wishes what he knows or believes to be bad for him. Men choose what, in fact, is bad for them, but it is only possible to make such a choice because the thing in question is falsely thought to be good. A man chooses an evil in spite of the fact that it is evil, certainly not because it is an evil. At this point the author asserts that a man may even know or believe that he will be sent to hell or to prison as a result of his choice, but at heart he thinks that it will be "worth his while" to accept these consequences—he will be better off even after paying this price for what he desires.

> Thus the proposition "all wrong-doing is involuntary" has nothing to do with the question of human freedom; it is merely the negative way of stating that a man who really knows what his highest good is, will always act on this knowledge. The man who really knows the good but chooses something else is as much of a nonentity as a round square, and it is just because "there is no such person" that the wildest paradoxes can be asserted about him. (p. 38)

Socrates' second argument for the immortality of the soul, found in the *Phaedo,* forms the basis of all the arguments of later metaphysicians who try to prove the immortality of the soul by showing that it is a simple substance. But this proof, as Kant for example knew it, is only a "ghost" of that found in the *Phaedo.* Kant attacked this argument on the ground that even if the soul were a simple substance, it might perish by a steady dissipation of "the intensity of its vitality." But Socrates' argument, writes Professor TAYLOR, was not that the soul was a simple substance—"he had not so much as the language in which to say such a thing," but, inspired by the Orphic religion, he was trying

to prove that the soul was something divine. "Its 'deiformity,' not its indivisibility, is what he is anxious to establish; the indivisibility is a mere consequence." (p. 189) Hence, he is not affected by Kant's valid criticism; if the soul is divine in its own nature it is secure against the "evanescence" of which Kant speaks.

One of the most interesting and novel points in the whole work is Professor TAYLOR's interpretation of the purpose of the *Parmenides,* which has always been a puzzle and about which the most divergent views have been held. In the first part of the dialogue Plato brings objections that are evidently Megaric in origin, to bear on the theory of the participation of sensible things in forms. The young Socrates is reduced to silence. In the second part Plato gives no answers to these objections of the Eleatics but endeavors to show after the method of Zeno that their own doctrine "reality is one" is in a much worse plight. He proceeds to shows that he too can play "the game of abstract formal logic," and even outdo its "professed champions" by applying their own method to their fundamental doctrine. The whole dialogue then, is an "elaborate *jeu d'esprit.*" It has no other purpose than to "have some fun with Monists who regard the sensible as an illusion."

Of the last chapter on the "Theory of Forms and Number," nothing can be said, but mention should be made of two important supplementary articles by the author on this subject: "A study in Platonic Metaphysics" (*Mind,* XXXV, October, 1926 and XXXVI, January, 1927). In conclusion the reviewer can only express his hearty gratitude and admiration to Professor TAYLOR for the finest, most up-to-date, and complete study in Platonic philosophy in the English language.

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Kant's Philosophy of Religion. By CLEMENT C. J. WEBB. New York: Oxford University Press, American Branch, 1926.

Everywhere in the warp and woof of modern religious thought strands of Kantian origin are readily discernible. Even the latest patterns of more fantastic weave reveal threads derived from the same philosophical loom. There is hardly a development in recent religious speculation that is not at least faintly foreshadowed in the Kantian

system. That God belongs to the world of values and not to that of reality certainly, in a fashion, has been anticipated by the Koenigsberg philosopher. Likewise that God is not known but used, as Leuba will have it, possesses a distinctly Kantian flavor. Even the extreme conclusion that the idea of God is a beneficent fiction can find hospitality in Kant's philosophy of religion. In view of the fact of Kant's indisputable influence on modern religious ideas a systematic account of his attitude toward basic religious problems is of special timeliness and usefulness.

The author has done his task exceedingly well. The volume that comes from his pen is distinguished by a lucidity of arrangement and a clearness of exposition not too common in philosophical writings. It lays under contribution all the works of Kant from the *Allgemeine Naturgeschichte* of 1755 to the fragmentary *Opus Postumum,* written in the last years of his life nearly half a century later and recently published by Professor Adickes. In this connected presentation of the subject new points are brought out and others placed in a stronger relief and in a more illuminating perspective. The essay will appeal both to the theological and the philosophical student. If anything the work brings home the fact that Paulsen was essentially right when he claimed for Kant the title of the Philosopher of Protestantism and contrasted him sharply with Thomas Aquinas. This Professor Webb substantiates when he points out the individualistic and unhistorical character of Kant's philosophy, which made him spurn a revealed and ecclesiastical religion. Kant's distaste for sacerdotalism (*Pfaffentum*) and court duties before God, by which he understands liturgical worship, is almost amusing. His feelings in this respect may have been inspired by unpleasant personal experiences in a pietistic atmosphere.

Kant's epistemology made him reject the traditional arguments for the existence of God. Only for the teleological argument did he manifest a measure of sympathy. But the latter argument could prove to him only an Architect, not a Creator, of the universe. Still his profoundly religious training and above all his strongly developed moral consciousness required a firm assent to the truth of God's existence. The road through pure reason being blocked he sought another approach through practical reason. In Kant's case the argument drawn from this source seems to have been conclusive. Apparently he always remained a sincere deist. But the inherent weakness of the argument lies in this, that it will not carry conviction except where there is, as

in Kant himself, a strong religious consciousness and a vivid sentiment of duty that imposes itself without question. In passing it may be remarked that Newman likewise regarded the voice of conscience as the supreme witness to the existence of God and that he had little use for the other arguments. The parallel is unquestionably highly interesting. For Kant as well as Newman the Categorical Imperative of Duty was an intimate experience and through it they were brought face to face with the existence of God and His moral attributes. Nevertheless in the case of Kant the flaw in the argument seems to have asserted itself in the course of time. His position in the *Opus Postumum* becomes hesitating and faltering. It appears that at the time of the writing of this work he began to waver between the transcendence and immanence of God. What he says there of the personality of God is full of confusion. To all appearances he had come under the influence of Spinoza. The remark, moreover, made at an earlier date, that every man would rightly be ashamed if found on his knees praying to God, indicates that he was not so sure of his ground and that he had but a vague concept of the transcendental and personal character of the deity.

Kant may be said to have rendered a service to religion by insisting on its implicit rationality. This is not without importance as recent movements run in the opposite direction seeking to reduce religion to non-rational elements. However, it must not be left out of sight that the doctrine of the irrationality of religion is a lineal descendant of Kant's own philosophy. Again, Kant emphasizes the ethical character of Christianity, but on the other hand empties it of all cultural values and completely denatures its mysteries. His appeal to practical reason in support of religious truth really undermines the whole structure of religion, for it creates the impression that his entire religious philosophy rests on the same insecure foundations as Vaihinger's philosophy of As If. Even Professor WEBB, who criticizes Kant as a disciple and admirer, cannot but endorse this conclusion.

In his philosophy of religion it becomes evident that Kant did not succeed in unifying his philosophical system. He labors in vain to identify the God of the starry heavens and the God of the moral law within him. Of course, this was impossible. The initial cleavage between the pure and the practical reason rendered the task utterly hopeless. There is an irremediable rift in the system, and this becomes wider as we ascend higher until in the culmination of the structure it appears as a menacing gap. Quite pertinently Professor WEBB re-

marks: "Among the sentences set down by Kant on the subject of the knowledge of God in the sheets published as the *Opus Postumum* there are some which make it impossible, I think, to suppose that Kant had completely clarified and reduced his philosophy to a consistent system." (p. 193) This is in perfect accord with the final verdict of Dr. Charles Sentroul, who in his penetrating study on Kant and Aristotle, crowned by the Kantgesellschaft, says: "Considéré de la sorte, nous le répétons, le système de Kant n'est pas cohérent. Or il doit son incohésion, sa dualité, précisement à ce que Kant a cru être le grand facteur de sa cohésion et de son unité, à savoir au primat de la raison pratique." (*Kant et Aristote.*)

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The Philosophy of the Abbé Bautain. By WALTER MARSHALL HORTON. New York: The New York University Press, 1926.

Professor Horton's presentation of the character and doctrine of the "Philosopher of Strasbourg" will come as a revelation to many readers, even to such as may be familiar with the history of Catholic thought in the nineteenth century. Will they subscribe to the author's contention that Abbé Bautain "may be regarded as the initiator of an anti-intellectualistic, intuitionistic, voluntaristic tendency in French Catholic thought which still persists in the school of the "Philosophy of Action"; that through this school, he stands in ancestral relation to French modernism; and that, finally, he may be reckoned along with Kant, Schopenhauer, Lotze, Maine de Biran, Ravaisson and Renouvier, as one of the forerunners of that great anti-intellectualistic tendency of recent years, which, in America, took the form of Pragmatism?" The reviewer confesses that he is not convinced by Dr. Horton's attempts to trace "the subterranean channels through which Bautain's influence operated."

It is a pleasure to acknowledge the evident sympathy with which he has sketched the dramatic "odyssey of an ardent soul" through alternatives of doubt and faith, of glory and obscurity, of hope in the revival of Catholic philosophy and apparent failure after his condemnation by ecclesiastical authorities. We gain a new insight into Bautain's inner life and into the evolution of his thought from the

author's unusual familiarity not only with the published works of Bautain but with many unpublished manuscripts and with the large collections of Bautainiana in the University of Strasbourg and in the College of Juilly. Moreover, as Bautain stood at the crossroads of German Kantianism and Romanticism and of French Traditionalism, we get from this book a broad outlook on the main currents of European thought in the nineteenth century.

In spite of the author's laudable effort at objectivity and impartiality, he allows himself, at times, to be carried away by his prejudices and to color with his own views the tendencies and the reactions of a thinker who may have erred but who remained a sincere and loyal Catholic. One feature of Dr. Horton's intellectual portrait of Bautain cannot fail to jar on the nerves of the Catholic reader: it is the ever recurring inclination he shows to saddle on his hero more or less contradictory attitudes. We fail to see how the Abbé could both acknowledge his mistakes and sign a formula of faith with mental reservations, be a modernist before the modernists and yet the most Catholic of philosophers, be a semi-pragmatist who had not the slightest tincture of pragmatic relativism, appeal to a purely individual and subjective authority and yet acknowledge the authority of the Church as supreme, die a disappointed man though for him true liberty was to be found only in loyal obedience to authority.

The book is too rich to allow an exhaustive review. The two main ideas of Bautain's philosophy, his pan-vitalism and his voluntarism raise too many questions for even a brief discussion. We shall therefore content ourselves with touching on his so-called anti-intellectualism, attempting to define his real position and pointing out what has remained of it as a permanent element of sound philosophy.

"It has been customary," writes Dr. Horton, "to see in Bautain simply a radical anti-intellectualist, a fanatical fideist demanding the sacrifice of reason upon the altar of religion, calling for the blind and implicit faith in an essentially irrational revelation." This seems to be a most unfair presentation of his system. Bautain speaks indeed of the "impotence of reason to found a metaphysics," but his real intent was to correct and complete the Kantian Critique of Reason by making a psychological study of the place of reason among the human faculties, and by pointing the way to a theory of religious knowledge based not on rational "postulates" but on moral and religious experience. Thus, as he himself puts it, "we do not exclude reason from

either science or from religion, but we limit its use, and that by virtue of an exact and thorough critique of its nature and capacities."

To form an exact estimate of his critique of reason one ought to bear in mind the excessive pretensions of the eighteenth century rationalists who had deified reason and believed it to be absolutely self-sufficient, while they restricted its range to cover the field of what the French call *raison raisonnante.* Even the philosophical textbooks which were used in Catholic colleges and seminaries and which were dealt with so severely by Bautain, were inspired by a pure Cartesianism and betrayed both the pretensions and the weakness of that system which had succeeded in superseding the traditional Scholasticism. This fact and the analysis which he made of the evolution of the knowing process, in what was the first essay in genetic psychology, will give us the key to Bautain's low estimate of the cognitive validity of reason as compared with that of intuition or intelligence, faith and revelation.

For Abbé Bautain, the chief faculty of the soul is the will; all the other faculties are secondary. Reason, whose function it is to work discursively and to combine logically the data furnished by sensation and by intelligence, lies between sensation, which is that part of the mind which is directed toward the material universe, and the intelligence, which is directed intuitively toward ideas. Experience is prior to the specific function of cognition and represents something more inclusive than cognition; it is the indispensable condition, which begins with reflection upon experience. Reason's great failing is abstraction. "It operates on the things of the spirit as anatomy does on the body; it dissects, divides, decomposes, and consequently it presupposes death, or it kills." It overlooks the reality of life; left to itself, it is perpetually tending to reduce organisms to mechanisms, and the whole body of natural science, which is the typical product of the unaided reason, presents a thoroughly artificial view of the world compounded, in the words of Bautain, "not of true ideas, but of mere notions." Man, fortunately, possesses a faculty higher than reason, responsive to deeper realities than those of which reason is cognizant, enabling him to know things as organic and living, to apprehend the spiritual behind the natural world. That faculty is intelligence.

There is still a higher knowledge than intellectual knowledge; it is "the knowledge of the heart." If we would know God, "the supreme Good who gives Himself to all and excepts none," we must first love: for love alone unites intimately to the object, while cold intellectual

curiosity contents itself with externals, and ill-will or impurity absolutely distorts the vision. The dialectic of intelligence thus leads to the dialectic of the will; the conditions of religious knowledge are ultimately moral. Yet it is to be noted that by faith our author does not mean blind faith, neither the Kantian postulation, nor the pragmatic "venture or leap in the dark"; he means either willingness to make assumptions or, better, dawning perception of truth. He speaks, indeed, of the "will to believe," but, in his theory, if the will decides, it is not because practical exigencies demand a blind decision, but because the will is more discerning than either reason or intelligence itself. Faith can no more be classified as an act of cognition only than as an act of the will only, or as a stirring of the emotions. If it is any of these, it is all three. If it is sometimes called a sentiment, it is also a motive of action.

Finally, Bautain holds that man's pretension to independence and autonomy is folly; the path to true knowledge is the path of dependence, of receptivity, of docility. Neither reasoning alone, nor discursive thought alone, nor mind alone, nor the whole soul of man so far as it remains alone, can do or know anything. Take man apart from his environment, apart from society, apart from the stimulating influence of God, he becomes incapable of real knowledge.

Granting that Bautain's denunciation of the insufficiency of the method of teaching philosophy in the seminaries of his day was too bitter, granting also that in his criticism of rationalism he used a language that appeared to disparage the value of reason, and that his insistence on the necessity of faith and will as a complement of reason was carried to the point of making them appear as the sole means man has of acquiring religious knowledge, granting therefore that he rightly deserved the censures which fell upon him, is it correct to make him a forerunner of pragmatism and modernism? By no means. Bautain is neither a subjectivist, nor a relativist; truth for him is objective; it is found, not made; and if, in his analysis of the psychology of certitude, he lays stress on the need that man has of the truth, it is not in the sense of the pragmatists; for him certitude is "a conviction carried to the point of excluding doubt entirely and compelling at once the complete adherence of the mind and the firm assent of the will."

His criticism of science with its purely abstract notions may remind us of Bergson, but it reminds us also of the contrast which Newman

sharply draws between the notional and the real assent, and the insufficiency that he sees in discursive reasoning is the same insufficiency that Newman recognizes and supplements by the operations of the illative faculty. Some of the most authorized exponents of Thomistic intellectualism, Rousselot and Olgiati for instance, admit above the *raison raisonnante,* which deals with abstract concepts and laws, a higher form of knowledge which goes deeper into reality, understands the individual and the concrete, the "intellectus," which often goes by the name of intuition. The latest Scholastic champion of intelligence, Dr. Sheen, admits a non-intellectual approach to God and confesses that the act of knowledge itself is not, strictly speaking, of the intelligence alone but of the whole soul. The appeal to the heart which we find in Bautain's apologetics as in Pascal's apologetics and in Laberthoniere's "Dogmatisme Moral" is universally recognized as a necessary as well as an efficacious preparation of the soul to grasp the force of the philosophical and historical arguments. When Bautain, before Blondel, elaborates the Philosophy of Action, it is no more with him than with Blondel, in the sense in which pragmatism makes the working value of a theory the criterion of its truth, it is on the conviction that philosophy must answer the problems that life forces upon man, must help man to live more abundantly. To this end it is not enough to give a definition of life; man must be brought to understand himself and his fundamental aspirations and to recognize that in God alone can he find the satisfaction of these aspirations and motives of action that will make life worth living. That, and not an abstract definition, will man accept as a philosophy of life.

This we find in the doctrine of the "Philosopher of Strasbourg" and in this truly orthodox sense can we say that he was one of the forerunners of modern Scholastic philosophers. Even if we have to qualify Dr. Horton's judgment, we are grateful to him for having revived for us, at the cost of great labor, the figure of one who was truly endowed with "a most acute intelligence and a passionately religious spirit."

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Le point de depart de la metaphysique cahier, V: Le Thomisme devant la philosophie critique. By J. MARÉCHAL. Edition du Museum Lessianum. Paris: Felix Alcan., 1926. Pp. xxiv + 482.

The author, professor of philosophy at the Jesuit House of Studies, University of Louvain, is already well known by reason of his treatises on theological, mystical, and philosophical topics. While the first four volumes published under the above title are an able and critical exposition of the starting points of the principal systems in the field of epistemology, the last one presents an almost entirely new and original aspect of this problem. It is an attempt at partially reconciling the Thomistic philosophy with that of Immanuel Kant.

One of the most important and at the same time most difficult problems in contemporary philosophy is undoubtedly the epistemological problem, the correct solution of which is immensely important not only for abstract speculation, but also for religion and ethics. Although this problem has never been entirely neglected, it is only within the last century that it became one of the most discussed topics in the field of the speculative sciences. The most important reason for this is the influence of Kant's transcendental critiques on all philosophical schools, so much so that today every metaphysical system must take into account the philosophy of Kant.

The consciousness of this necessity is becoming more and more evident also among neo-scholastic thinkers who, without abandoning or changing their fundamental postulates, are attempting to base the defense of old truths on new arguments. And on this new road of philosophical speculation some neo-scholastics have arrived at the startling opinion that the strongest arguments by which the attacks against Scholasticism can be repelled are to be found in the fundamental principles of Kantianism. This attempted synthesis of two apparently irreconciliable systems, Scholasticism and Kantianism, has already found partial expression in the treatises of P. Rousselot, A. Sertillanges and Blondel, but it is only in Maréchal's book that we have a complete exposition of a Thomistic Kantianism or Kantian Thomism.

Whether or not one agrees with the author, it is impossible not to appreciate his unusually original mind, a skilled critical sense manifested by many deep reflections, and his novel conclusions. By a detailed analysis of both these philosophical systems, the author claims to have discovered some common fundamental points and intrinsic similarities in spite of their apparently diametrically opposed principles.

By a very careful juxtaposition of Thomistic texts Maréchal argues that the *formae a priori* were not only well known to the Angelic Doctor but that they are indissolubly connected with the whole edifice of Thomistic philosophy.

Anyone who does not want to adhere to radical empiricism, a school unable to explain the universality and necessity characteristic of knowledge, must according to the author, accept some type or other of aprioristic forms, not as innate ideas, of course, but as functioning dispositions of the knowing mind, as subjective directives guiding the selection of received impressions, as general laws controlling the building of the object of knowledge. Maréchal sees these *formae a priori* in St. Thomas' doctrine on the *objectum formale* of the cognoscitive faculties, on conditions of time and space with which the functions of sense are intrinsically connected while co-operating with the *intellectus agens* in creating ideas. The author assures us that to accept these aprioristic forms as St. Thomas understands them, that is to say, in a dynamic and by no means in a static sense, does not imperil the objectivity of knowledge. Based upon his conception of St. Thomas' theory on analogy of being and general concepts, this minute distinction between *modus rei* and *modus mentis,* the author gives warning to every Thomist not to identify objective knowledge with mere objective representations, nor to restrict the former to the latter.

While further developing the essence of the aprioristic elements in knowledge, Maréchal bases their objective function upon the nature of the knowledge faculties, and therefore, upon the intrinsic tendency of their immanent dynamism whose ultimate aim and also active impulse of movement is the *Ens absolutum.* The exposition of this statement touches a very subtle and delicate question: our supernatural destination and its difference from the immanent tendency of the knowledge faculties towards the *Ens infinitum.* Here the author quotes all those theological precisions, thanks to which St. Thomas avoids collision with the positive doctrine of the Church.

Having finally established the point that every act of the knowing faculty includes a transcendental relation to the Absolute, Maréchal finds in this a common ground with Kant for reaching the noumenon, for transcending his theoretic agnosticism and thus to improve, to deepen, and to complete his system by giving a solution for his well-known antinomies.

The learned author's arguments are undoubtedly very strong and appealing. Whether they are final, it is too early to decide. This theory will require much discussion before the last word can be said and the suspicion removed that Maréchal used now and then an *interpretatio nimis lata* of both philosophical systems. One great merit of Maréchal's scientific study must be emphasized: he is working in the direction which the Scholasticism of our day follows—the direction taken by progressive critical Thomism.

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Readings in Ethics. Compiled and Edited by J. F. LEIBELL. Chicago: Loyola University Press, 1926. Pp. xiv + 1090.

In an age clamoring for "self-expression," when "faith" in the "divine urge" is supposed to cast a halo of ethical sanctification over the most unregulated sex relations, when social custom dictates that the size of the nursery for "nice" families be in inverse ratio to the magnitude of the garage, when financial failure is deemed the chief if not the sole unethical or immoral factor in business, when for many the end of human existence is obscure, the means of attainment of life's purposes undetermined, and the relations between these two problematical, the serious student of ethical purposes and relationships will gladly welcome a work such as Dr. LEIBELL'S which furnishes sound guidance for grappling successfully with life's fundamental issues. *Readings in Ethics* will prove of immense value not only to the regular teacher and student of moral philosophy but also to anyone who wishes to find clearly presented a reasonable and fairly complete exposition of the basic principles which underlie all right thinking about the end of human existence and conduct, the source and nature of moral obligation, rights and duties, the origin and foundations of human society, social institutions, family and civic relationships, etc. This compilation of excerpts and articles forms, in fact, a large, worthwhile volume covering most of the phases of the basic and practical ethical problems confronting modern thinkers.

With the exception of an excerpt from Aristotle, two from St. Francis de Sales, and five from St. Thomas Aquinas, all the readings are taken from the writings of contemporary authors. Two of the encyclicals of Pope Leo XIII are drawn on for articles on The Conditions of Labor

and The Evil that Flows from Divorce. *The Joint Pastoral of the Archbishops and Bishops of the United States, 1919* furnishes readings on Industrial Relations, Divorce, Woman's Influence, The Catholic Attitude on Education, and on International Relations. The writings of Cardinals Manning, Newman, Mercier, Billot, Gibbons, and O'Connell each furnish a contribution on an important topic. No less than thirty-one articles are taken from *The Catholic Encyclopedia,* while the remainder of the one hundred and eighty-two excerpts and articles are from the writings of such authors as Cathrein, McNabb, Rickaby, Brosnahan, Maher, Slater, Cronin, O'Rahilly, Margaret Fletcher, McDonald, Blakely, Cuthbert, Hull, Fox, Macksey, Ryan, Husslein, etc.

While the *Readings* deal mainly with the presentation of the Catholic ethical phases of the subjects treated, yet a few articles expository of non-Catholic theories are included. The inclusion of additional readings as substitutions for some of the duplications, of articles presenting more of the non-Catholic ethical theories would considerably enhance the completeness of the work. Along with the readings, The Theory of Hobbes and Rousseau's Social Contract (both of which should more properly be listed under the division headed "The State"), might well be included brief articles expounding the political theories of such writers as Locke, Hegel, Compte, Spinoza, Spencer, etc. The Theories of the Divine Right of Kings and Nationalism are of sufficient historical and present-day importance to warrant special treatment in any complete exposition of the ethical theories on "The Nature of the State."

Besides, such topics as Vivisection, Duelling, etc., dealing with questions of minor importance at least in the United States, might with very considerable gain be replaced by specific articles on such fundamental subjects as The Intrinsic Distinction Between Good and Evil, Basis of Moral Obligation, The Nature and Division of Justice, Injustice, Restitution, Secrets, State Absolutism, Relation of State and Church, The Nature of the Marriage Contract, State Jurisdiction over Non-Christian Marriage, Eugenics, Sterilization of Criminals and Defectives, Co-operation in Sin, Ethics of Modern Dancing, Theater, Literature, etc., etc.

On the other hand, the work would suffer little through failure to enshrine in its pages the morsel from Woodrow Wilson's *The State* on "The Functions of Government," which, while devoid of any ethical significance, fails to accord even with the divisions of state functions generally accepted by modern authorities on Political Science. The article on "The Ethics of Strikes" might also be replaced from the

writings of one more competent to deal with what the author of the article notes "is a large order." The topic certainly involves such complexities that it had better be left alone by anyone not well acquainted with the fundamental economic facts and moral issues involved. The substitution of Chapters XI and XII of *The World Problem* by Joseph Husslein, S. J., or of a part of the article on "Labor Unions" in *The Catholic Encyclopedia* by Dr. John A. Ryan, or a chapter from his work *The Church and Socialism* would undoubtedly set forth more accurately the conclusions of informed Catholic moralists on this vital issue and furnish as well safer guidance for interested readers.

The utility of the collection of readings would also be considerably enhanced by the addition of a more complex subject index. For the ordinary reader a nine-page index of proper names is of little service, while the three and one-half pages of a sketchy index of subjects hardly does more than repeat what has already been listed in the five and one-half page table of contents.

In spite of these restrictions *Readings in Ethics* furnishes much material worth careful reading, serious reflection, and practical application to the complicated issues and problems of modern life.

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A Study of Gersonides In His Proper Perspective. By NIMA H. ADLERBLUM. New York: Columbia Univ. Press, 1926.

Jewish philosophy is the expression of Jewish history, or the reflection of the emotional content of the Jewish past. Hence the philosopher who adheres most closely to Jewish traditionalism is most representative of that school of thought; while he who departs from the national spirit of Judaism fails in a greater or less degree to exhibit true Jewish philosophy. Furthermore the historian of philosophy who studies a Jewish thinker in the light of what he has given to or taken from other philosophies does not place him in his proper perspective setting. The historian is, therefore, little able to appreciate the true spirit of his philosophy.

This in brief is the thesis of NIMA H. ADLERBLUM in her monograph, *A Study of Gersonides.* Her purpose is to study this philosopher of the later thirteenth and early fourteenth centuries, not from the stand-

point of his doctrines, whether taken from Aristotle, Plato, or Averrhoes, nor from the point of view of any mutual influence with Scholasticism, but in the light of Jewish traditionalism which underlay his teachings. Accepting the philosophy of Judah Halevi as genuinely Jewish, the author by a comparative study criticizes Gersonides, in whom the rationalization of Jewish thought reached its highest point.

It is gratifying to see Jewish students, who alone are fitted for the work, expounding their philosophers of the past. We cannot give unqualified countenance, however, to the statement that "old systems of philosophy are worth unearthing only if we can reintegrate in them the emotional content." Emotional content and the atmosphere of the age in which a system of thought flourished are of unquestioned importance; but old philosophies are worth preserving and building upon because of their thought content. For the thought of any age or philosophy, if true, is eternal, and the heritage of all succeeding generations.

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CURRENT PHILOSOPHICAL REVIEWS AND BOOK NOTES

The Journal of Philosophy—Vol. XXIV, No. 3: February 3, 1927.

John Dewey: "Half-Hearted Naturalism." Defines his position of empirical naturalism as against the charge of half-heartedness made by Santayana. **Edgar Wind:** Alfred C. Elsbach's Kant und Einstein. Elsbach distorts Kant's thought in order to make it appear to harmonize with Einstein. Where Kant seems to have anticipated Einstein, Elsbach goes to great lengths to prove this impossible on the theory that anticipation of scientific results by philosophical speculation must always be wrong.

The Journal of Philosophy—Vol. XXIV, No. 4: February 17, 1927.

Percy Hughes: The Biotic Center of Psychology. Psychology must study the individual life in its unity and distinctness. The 'life-history' is essentially active. It is the function of psychology to discover the laws of the life-career. Galton and Freud have shown the way. **Morris A. Copeland:** An Instrumental View of the Part–Whole Relation. The part-whole relation is purely relative. This presupposes a relativistic theory of identity; a judgment of identity is viewed as a value judgment. A determination of one's purposes determines whether and how far the part is to be identified with the whole. Numerous illustrations are advanced.

The Journal of Philosophy—Vol. XXIV, No. 5: March 3, 1927.

Percy Hughes: Theory and Practise in Psychology. Given the 'biotic' conception, we must first of all postulate that in the life-movement we have "something of immediate intuitive insight." We must also postulate a universe of 'social recognition.' Using Euclidean geometry as an example, he illustrates the application of the biotic method in the field of psychology. **Susanne K. Langer:** A Logical Study of Verbs. The verb is generally assumed to introduce a truth value and to verify a proposition. Neither conception is necessary in order to explain logically the function of the verb.

The Journal of Philosophy—Vol. XXIV, No. 6: March 17, 1927.

C. O. Weber: Simplicity versus Adequacy in the Definition of Instinct. Recent psychologists deny the existence of instincts on a priori grounds not by inference from facts. First, they postulate that everything including mental acts is motion—a forced and oversimplified postulate. They oversimplify the facts by excluding all introspective data. We must study *all* the facts first. **Percy Hughes:** The Normative in Psychology and Natural Science. Viewed biotically, human acts may be judged to be good or bad in as far as they promote life—individual and social; the "possibility of a genuine ethical science becomes for the first time conceivable."

The Journal of Philosophy—Vol. XXIV, No. 7: March 31, 1927.

Sidney Hook: Categorical Analysis and Pragmatic Realism. Categories may be regarded as structural or conceptual. Hook rejects the structural or Aristotelian view because "it is based on an inadequate empirical analysis of the environment, on an antiquated system of scientific conceptions, and a crudely mechanized biology." He rejects the conceptual or Kantian view because "its psychological presuppositions are mythical." He advocates a pragmatic theory in which mind is regarded as a mode of behavior and the categories as characteristics of mind in its operations. This principle is illustrated from many angles.

The Journal of Philosophy—Vol. XXIV, No. 8: April 14, 1927.

William James: Reason and Faith. **Emmanuel Leroux:** Notes Toward the Completion of a Bibliography of the Writings of William James. Completes the bibliography of Professor Perry, particularly by the addition of French articles.

The Journal of Philosophy—Vol. XXIV, No. 9: April 28, 1927.

W. W. Spencer: Our Knowledge of Other Minds. Examines the theory of Broad that "natural expressions" occasion a belief in the existence of other minds and concludes that the "best logical proof of the existence of other minds is found in the expression of judgment by other individuals, whether this be done through language or by other means." **Roy Wood Sellars:** What is the Correct Interpretation of Critical Realism? States that the doctrine of essence is not central to critical realism as against the criticisms of Professor Calkins. The important doctrine is that "the knowing of an object does not demand its literal presence in the consciousness of the knower."

The Philosophical Review—Vol. XXXVI, 2: March, 1927.

Paul Arthur Schilpp: The "Formal Problems" of Scheler's Sociology of Knowledge. Scheler's fundamental principles are three: (1) culture is a social phenomenon; (2) no social phenomena without knowledge; (3) knowledge is conditioned by social phenomena. Social knowledge is a priori not empirical. Scheler distinguishes sharply the "group-soul" from the "group-mind." Social experience is essentially plural and reducible to five spheres. Schilpp briefly criticizes some of the assumptions and conclusions of Scheler. **Arthur E. Murphy:** Objective Relativism in Dewey and Whitehead. The writer contends that 'objective relativism' involves (1) "that the objective facts of the world of nature and of reality are the relative happenings disclosed in perception"; (2) "in spite of their objectivity such facts are relative." Relativity, therefore, is an ultimate fact. Murphy contends that both Dewey and Whitehead arrive at this conclusion though from different starting points. **Sterling P. Lamprecht:** Locke's Attack upon Innate Ideas. Lamprecht contends that Locke in the "Essay" approached epistemology from the angle of theology and that this fact explains somewhat the position he took. The evidence, internal

and external, for this interpretation is presented. **Virgil Michel:** Why Scholastic Philosophy Lives. Answers some of the objections ordinarily made against Scholasticism as a living philosophy. **Virgil Michel:** Discussion. An Organic Superpersonality?

The Personalist—Vol. VIII, No. 2: April, 1927.

F. C. S. Schiller: William James and the Making of Pragmatism. The part played by Schiller in the making of Pragmatism. **Edwin A. Burtt:** Real versus Abstract Evolution. Philosophy has not been truly empirical. For example, the theory of emergent evolution is self-contradictory and unverifiable, if viewed empirically. Burtt contends that "empirically the past always emerges out of the present rather than the present out of the past." "Real evolution is not a temporal process; it is a more inclusive movement in which physical time will appear as interest in anticipation and control takes definite form." It is a problem not of geology but of perspective. **Ralph Tyler Flewelling:** Static Mindedness. Ancient idealisms lead to a static monism. But modern naturalisms are no less static, although in a different way. The demand for a monism of substance is the cause of staticism in both cases.

Harvard Theological Review—Vol. XX, No. 1: January, 1927.

Henry A. Sanders: A Papyrus Fragment of Acts in the Michigan Collection. **William J. Wilson:** The Career of the Prophet Hermas. **Maurice Goguel:** Recent French Discussions of Christianity: The Series 'Christianisme.'

The Open Court—Vol. XLI, No. 2: February, 1927.

Victor S. Yarros: A Singular, Inadequate Conception of Philosophy. Discusses Durant's definition. **Theodore Schroeder:** Deterministic Presupposition of Psycho-Analysis. Against the admission of free-will in psychology.

The Open Court—Vol. XLI, No. 3: March, 1927.

Ernest T. Paine: A Post-Kantian Antinomy. An argument against teleology.

The Open Court—Vol. XLI, No. 4: April, 1927.

Fletcher Harper Swift: Religious and Moral Training Among Primitive Peoples.

Psychological Review—Vol. 34, No. 2: March, 1927.

Harvey Carr: The Interpretation of the Animal Mind. A criticism of Washburn's theory. **Max Shoen:** Instinct and Man. The term needs clarification. Author would substitute for it "forms of native behavior." **H. G. Wyatt:** The Recent Anti-Instinctivistic Attitude in Social Psychology. Examines rejection of instinct by Allport, Bernard, and Dunlap. Concludes that they have not successfully banished instincts. **Carl John Warden:** The Historical Development of Comparative Psychology. (Cont.) From the sixteenth century to Darwin. Important bibliography.

The Journal of Abnormal and Social Psychology—Vol. XXI, No. 4: January-March, 1927.

Wayland F. Vaughan: The Psychology of Alfred Adler. **Floyd H. Allport:** The Present Status of Social Psychology.

The Monist—Vol. XXXVII, No. 2: April, 1927.

L. L. Bernard: Hereditary and Environmental Factors in Human Behavior. An attack on instincts as the ground of a scientific sociology. An affirmation of the rôle which environment must play. **I. W. Howerth:** The First Principle of Social Evolution. Traces evolution through the inorganic world to mind and to social groups. All evolution exhibits a fundamental principle, that of synergy or 'creative synthesis.' Man can direct social units or ideas into combinations as he wills. **A. E. Heath:** The Notion of Intelligibility in Scientific Thought. Paper read at Sixth International Congress of Philosophy. **E. T. Mitchell:** Kantian Relativity. An analysis of Kant's theories of motion, space, and time. The author sees in Kant the beginnings of the modern mathematical space-time philosophy, and in this views an extension of Kant's principles. **William C. Swabey:** The System of Bradley. Analyzes the idealism of Bradley. **Charles E. Whitmore:** The Autonomy of Esthetics. Makes a plea that esthetics be recognized as an autonomous science yet the author would not divorce it completely from philosophy; esthetics would be an approach to philosophy, not a mere ornament of philosophy. **A. E. Freeman:** The Nature of Coherence in Aesthetics. **G. M. A. Grube:** Plato's Theory of Beauty. Beauty for Plato is the "harmony of the world the result of the introduction of measure or number by intelligence; it is inseparable from Good." **Oliver L. Reiser:** A Spiritual Behaviorism. Attempts "to show that a 'spiritual behaviorism' can be derived from the most fundamental principles of physics, the principle of least action." **Criticisms and Discussions:** Science and Subjectivity, Marie Collins Swabey. Science and Subjectivity, H. Wildon Carr.

The International Journal of Ethics—Vol. XXXVII, No. 3: April, 1927.

C. Delisle Burns: Progressive Morality. The science of ethics has nothing to do with morality because morality is an art. Morality is the relation to an ideal which is never reached because it is always changing. Progress consists in doing so-called "bad" things until they become accepted as good. ". . . the desire for moral absoluteness . . . is pathological." **Louis Arnaud Reid:** Beauty and Moral Betterment. In an esthetic appreciation of life and its meaning there is a unifying means for organizing the complexity of modern life. The desire for "wholeness" in esthetics "may help toward the formation in the individual mind of a sense of values of transient things in relation to a larger whole." **Charles W. Morris:** The Total-Situation Theory of Ethics. Moral behavior is but one form of behavior arising out of the need of cooperative life. "Freedom is the capacity to direct one's own behavior by absent stimuli operat-

ing through symbols." The perfect morality is one that gives the individual his proper place in the total situation. ". . . the moral law had better be phrased, So act as to do maximum justice to all the personalities involved." **C. F. Taeusch:** An Approach to the Science of Ethics. Limiting "moral" to situations of conflict between the individual and the group the term "ethics" is applied to the relation of individuals and members of the group, as in "business ethics." The principles of these "ethics" are arrived at pragmatically and even by experiment, and "are constantly subject to change and reformation." **Rupert Clendon Lodge:** Platonic Immortality as the Highest Good. Platonic immortality consists in participating in the life of the immortals. This is done by developing the superior and more godlike of man's powers. This includes, besides the intellectual element, all of man's nature "that can be so reorganized as to serve as the instrument of the immortal purpose." This is the highest good because it means "to realize one's self and, at the same time, to make one's greatest possible contribution to the whole."

Revue Neo-Scolastique de Philosophie—Deuxième série, No. 13: Février, 1927.

M. deWulf: Y eut-il une philosophie scolastique? The author defends, against the objections of Gilson, Sassen, and Théry, the position underlying his *History of Mediaeval Philosophy* that there existed especially in the thirteenth century a common patrimony of philosophical doctrines. **M. Techert:** Le Plotinisme de Jean Scot Érigène. A critical examination of the doctrines and in particular the terminology of Scotus to prove that he knew and was influenced deeply by Plotinus. **E. Longpré:** Questions Inédites de Maitre Eckart, O. P., et de Gonzalve de Balboa, O. F. M. Longpré presents two Questions of Eckart and one of Gonzales found in MS 1071 of Avignon and hitherto unpublished, which are of considerable importance for an understanding of philosophical thinking at the beginning of the fourteenth century. The first question is: Utrum intelligere angeli, ut dicit actionem, sit suum esse. The second: Utrum in Deo sit idem esse et intelligere. Gonzales treats the question, Utrum laus Dei in patria sit nobilior ejus dilectione in via. **M. deWulf:** Bulletin d'Histoire de la Philosophie médiévale, 1915-1925. (Cont. from Feb., 1926.)

Revue Thomiste—T. X. No. 43: Janvier-Février, 1927.

A. Gardeil: La Structure analogique de l'intellect—Fondement de la puissance obédientielle au surnaturel. **Xavier Maquart:** La Causalité du signe—Réflexions sur la valeur philosophique d'une explication théologique. The author examines the nature of a sign, analyzes its causality, and concludes that the theory cannot be applied to the causality of the sacraments except by denying that they possess any real efficient causality. **Timothée Richard:** La Probabilité et la raison pratique (suite et fin).

Revue Thomiste—T. X. No. 44: Mars-Avril, 1927.

Odon Lottin: Les définitions du libre arbitre au XIIIe siècle. As an introduction to the doctrine of St. Thomas on Free Will, the author examines the psychological teachings on reason and will by means of exact quotations from the writings of St. Anselm, Anselm of Laon, St. Bernard, Hugh of St. Victor, Abelard, and Peter Lombard. He also hopes to establish tentatively the chronological order of these writers. (To be continued.) **Pierre Mandonnet:** Les opuscules de saint Thomas d'Aquin. An exhaustive critical study of the minor writings of St. Thomas which seems to confirm the author's conclusions reached in his earlier work *Des écrits authentiques de saint Thomas d'Aquin.* The article will appear as the introduction to his *Opuscula omnia, genuina quidem nec non spuria melioris notae, debito ordine collecta,* to be published by Lethielleux.

Bulletin Thomiste—IVe Année, No. 1: Janvier, 1927.

Reviews *Le point de départ de la métaphysique* of J. Maréchal. Also contains a long critical study by A. Mansion of Professor Roquier's attack on Scholasticism in his *La Scholastique et le Thomisme.* The replies of Maquart to Rougier which appeared in *Revue de Philosophie* and in *Revue Thomiste* are analyzed.

Revue d'Histoire de la Philosophie—Fasc. 1: Janvier-Mars, 1927.

A new quarterly review devoted to critical studies in the history of philosophy. **August Dies:** Le Problème de l'Un et du Multiple avant Platon. Setting a few guide posts along this little known way from Thales to Plato. **Henry Gouhier:** La première polémique de Malebranche. Simon Foucher. An academician but not a sceptic. Foucher Criticism of *La Recerche de la Vérité* gave rise to the first controversy of Malebranche. Foucher charges that Malebranche's work rests on seven gratuitous suppositions, while his demonstrations are merely seven unproved assertions. Foucher attacks what Arnauld later calls "the doctrine of false ideas." **L. Lévy-Bruhl:** Les tendances générales de Bayle et de Fontenelle. Philosophy of the eighteenth century in its disdain for metaphysics and its attacks on religion differs widely from philosophy of the preceding century. Bayle and Fontenelle were influential in this change. Bayle: dogmas of religion are shocking and absurd to reason, and morality does not depend upon belief. We, however, must submit entirely and blindly to revelation. Fontenelle: Metaphysics is foolishness (he was a mathematician and physicist). Strong dislike for Christianity. Applies scientific method to the study of progress and development of human race. **Charles Andler:** Quelques sources de la philosophie intellectualiste de Nietzsche. Herodotus, Thucydides, Plato, and the Gospels. Nietzsche read *Les Evangiles* of Renan but was little impressed. For him Christ was *der edelste Mensche* but was deceived in His belief that He was the Son of God. Voltaire, Diderot, Charles de Rémusat and Leopold von Ranke.

Scholastik—II. Jahrgang, Heft 1, 1927.

Maria Sladeczek: Das Widerspruchsprinzip und der Satz vom hinreichenden Grunde. The writer maintains that the principle of contradiction and not that of identity is the foundation of all principles, and consequently the principle of sufficient reason is based thereon.

Kant-Studien—Band XXXI, Heft 4, 1926.

Fritz Medicus: Rudolf Eucken zum Gedaechtnis. A brief exposition of Eucken's philosophy. **Karl Buehler:** Die Krise der Psychologie. The crisis in psychology is due to the phenomenal increase of new ideas, orientations, the fruit of modern research. The psychophysics of Fechner, Wundt, Ebbinghaus and others studied memory and sensation. Kuelpe advanced beyond these narrow limits and studied thought and volition, and showed that associationism was not sufficiently broad to account for thought and volitional activities—activity as distinct from content. Introspective psychology had to be newly orientated, toward "meaning" of representation, and with that toward teleologism. The crisis became acute through behaviorism, which in so far as it is positive and useful necessarily leads to teleologism. Teleologism is the unifying principle of introspection and behavioristic psychology. **Hermann Jordan:** Das Apriori bei Tier und Mensch. Instinct in animals is not to be explained by a series of reflexes, but by means of an a priori power of synthesis. This innate ability is not identical with but analogous to human "intuition" of totalities. **Georg Misch:** Die Idee der Lebensphilosophie in der Theorie der Geisteswissenschaften. Dilthey combining anthropology with history bridges the chasm between speculative (systematic philosophy) and the positive sciences. **Betty Heimann:** Vergleich der Antithesen europaeischen und indischen Denkens. The Indian mind is uncritical in that it does not perceive opposites as opposites. Mind and matter, rational and irrational, science, religion and art all commingle in the mind of the East Indian. He does not become conscious of contradiction after the manner of the analytical and critical Western mind. **Heinrich Maier:** Alois Riehl, Gedaechtnisrede, gehalten am 24, Januar 1925. Neo-Kantian fundamentally, Riehl sought a broader basis for his Criticismus and went back to Locke and Hume. For him Hume is to be considered on equal terms with Kant in the initiation of the Criticist movement. The claims of positivism (never popular in Germany) were acknowledged and appreciated by Riehl. **Arnold Kowalewski:** Dietrich Heinrich Kerler, Eine Wuerdigung. **Johannes Lochner** edits the reports of Dr. H. v. Glasenapp on Sixth International Congress of Philosophy, Harvard, 1926.

Rivista di Filosofia—Anno XVIII, No. 1: Gennaio-Marzo, 1927.

Giuseppe Tarozzi: L'indeterminismo e la scienza. Determinism is essential to science as inventive and expository. Indeterminism is a part of science if we interpret science to mean the spirit of research which subjects itself to logic and to method, that is, to reason. The world of

nature is determined, the world of spirit is free. **Piero Martinetti:** Il problema della libertà in E. Kant. How reconcile determinism with free will? How reconcile the dilemma of human freedom with subjection to moral law? Human acts viewed as phenomena are subject to necessity; viewed in their relation to the thinking mind, they are free. Freedom is not a mere abstraction, it is a necessity of the moral life since it results from our subjection to moral law: it is not transcendental but practical. Human liberty is not the liberty of indifference but a liberty which has not been determined passively. The Kantian theory contains many difficulties as yet unsolved. It is not a definitive solution. **Emilio Morselli:** La figura ideale dell'educatore. **Annibale Pastore:** Critica della critica d'arte a proposito del gusto dei primitivi. A criticism of the recent work of Lionello Venturi entitled *Il Gusto dei Primitivi.* Art, according to Venturi, is an institution of God, a divine inspiration, a mystical state, and he cites examples from the primitives.

Rivista di Filosofia Neo-Scolastica—Anno XVIII, Fasc. V-VI: Settembre-Dicembre, 1926.

Paolo Rotta: Il Cusano e la lotta contro gli Ussiti ed i Maomettani. The story of Nicolas of Cusa's fight against the Hussites at the Council of Basle on the question of communion under both species. Later Nicolas, as Papal Legate, continued his work of reconciliation. He was also much interested in the doctrines of Islam and wrote several works against the menace of Mohammendanism, in particular, one on the Koran. **Ernesto Bignami:** La catarsi tragica in Aristotele (cont.). **Francesco Olgiati:** Il movimento filosofico neoscolastico ed il pensiero contemporaneo anglo-americano. A review of *Present-Day Thinkers and the New Scholasticism.* **Giacomo Franceschini:** Il significato e il valore dell'opera filosofica di Francesco Bonatelli. One of the first Italian opponents of positivism and subjective idealism. His best known work: *La conscienza e il meccanismo interiore.* **Gustavo Bontadini:** La critica negativa dell'immanenza. Continuation of his polemic against the New Idealism by citing arguments against the doctrine of immanence and by examining the arguments offered in Croce and Gentile. **A. Bros:** La sociologisme de Durkheim et la religion. Describes the system of Durkheim, its manner of approach, methods, and conclusion that religion is exclusively a social fact. Criticizes the system because of its essential relativity, a priori methods, radical evolutionary viewpoint, and its unacceptable conclusions which in fact destroy but do not explain religion. **U. A. Padovani:** Bollettino di filosofia della religione (cont.).

Rivista di Filosofia Neo-Scolastica—Anno XIX, Fasc. I: Gennaio-Febbraio, 1927.

Mariano Cordovani: La filosofia della morte nell'idealismo gentiliano. A critique of Gentile's principle, "we are spirit and as spirit a single activity, as a matter of fact but a single act of love," in its applications to life, war, education, and art. **Paolo Rotta:** La biblioteca del Cusano.

An analysis of the sources of the philosophy of Nicolas of Cusa. **Giuseppe Zamboni:** Se gli sviluppi superiori della geometria introducono elementi gnoseologicamente puri. Concludes that neither analytical geometry, differential calculus, non-Euclidean geometry, nor the attempts to reduce geometry to logic bring to light any new elements for a theory of knowledge which philosophy has not already discovered.

Rivista Rosminiana—Anno XXI—V della terza Serie, 1927: Fasc. I.

A. Rosmini: Le illusioni della felicità. An extract from the work of Rosmini *Società ed il suo Fine.* **Carlo Gray:** Intuizionismo bergsoniano e Intuizione dell'essere rosminiana. The author compares Bergsonsian intuition with that of Rosmini, intuition of Being according to Rosmini, creative evolution and the perennial actuality of Being of Rosmini, and finally the creative act as the basis for a solution of ontological and epistemological problems in Gioberti, Rosmini, and Bergson. **Giuseppe Bozzetti:** Rosmini nel Diario di Margherita di Collegno.

Gregorianum—Anno VIII, Vol. VIII, Fasc. 1: Martio, 1927.

A. Rozwadowski: De problemate criteriologico. After stating the problem the author takes up the skeptical approach, which he rejects. He then begins a discussion of idealistic objections concerning the objectivity of our judgments. (To be continued.)

Archivum Franciscanum Historicum—Annus XIX, Fasc. iv: October, 1926. (Quaracchi.)

A. G. Little: The Franciscan School at Oxford in the Thirteenth Century. An exhaustive and interesting monograph on the origin of the Franciscan School and of its relations to Oxford. The historical succession of professors and writers is given; also of bachelors. **Ephrem Longpré:** Fr. Thomas d'York, O. F. M.: La première Somme métaphysique du XIIIe siècle. Father Longpré recites the life of Thomas of York. He then examines the treatise "Manus quae contra Omnipotentem." His "Sapientiale" is then examined, MSS criticized, and the doctrinal and philosophical significance pointed out. There follows the Table of Contents of the "Sapientiale" and of the opusculum "Comparatio sensibilium."

La Filosofia di Benedetto Croce. By Emilio Chiocchetti. 3rd rev. ed. Milano: Società Editrice "Vita e Pensiero," 1924.

Professor Chiocetti has attempted in this book, well known in Italy, to give a faithful exposition of the system of Benedetto Croce as it is found in the different works of the Neopolitan philosopher and in the pages of "Critica." This he has done scientifically and dispassionately. The historical relations of Croce to Hegel are analyzed and the continuity of Italian neo-idealism with Hegelian absolutism demonstrated. Finally, Chiocchetti analyzes the "philosophy of the spirit" from the point of

view of the New Scholasticism and indicates where it is possible to agree with Croce and where one must disagree. The book ends with a critique of the interpretation of the Divine Comedy propounded by Croce and Gentile.

La Filosofia di Giovanni Gentile. By Emilio Chiocchetti. 2nd rev. ed. Milano: Società Editrice "Vita e Pensiero," 1925.

An excellent exposition of the doctrines of Gentile together with a criticism which is exact and penetrating. The work deserves to be widely known in the United States where very little sound criticism of Gentile has as yet appeared.

Opuscoli Mistici—S. Bonaventura da Bagnoregio. Biblioteca Ascetica, Vol. VII. Translated from Latin with introduction by Agostino Gemelli. Milano: Società Editrice "Vita e Pensiero," 1926.

After the usual introductory and bibliographical notes there follows a translation of ten Opuscula of St. Bonaventure. Among others such well known mystical treatises as "The Mystic Vine," "Treatise on Preparation for Mass," "On the Life of Perfection," "The Tree of Life," and "The Three Ways" are rendered into beautiful limpid Italian. The student who takes the time to peruse these minor works of St. Bonaventure will agree with Professor Gilson who, in his *La Philosophie de Saint Bonaventure*, remarked that "the doctrine of St. Bonaventure reaches the high water-mark of Christian mysticism and is a perfect example of the most complete synthesis realized up to that time by mystical thought."

Il Mio Contributo Alla Filosofia Neoscolastica. By Agostino Gemelli. Milano: Società Editrice "Vita e Pensiero," 1926.

This work written originally for the collection "Die Philosophie in Selbstdarstellungen" of Professor Raymond Schmidt outlines a profession of philosophic faith on the part of the leading Italian Neo-Scholastic, Professor Agostino Gemelli, Rector of the Catholic University of Milan. Being a statement of the author's philosophical position, it is to be expected that the personal note should be struck often, and, at times, somewhat loudly, though never, may we add, offensively. Professor Gemelli begins with the history of his own education in philosophy, how he passed successively through positivism, Marxian socialism, psychology, and biology to the New Scholasticism. He feels that his experiences are typical of the present-day Italian student with the difference that, while he became a Neo-Scholastic, others have turned from positivism in the direction of neo-idealism.

Two major questions seem to be occupying the minds of Italian thinkers. One is the problem of the relations of science to philosophy, the other of the relations of history to philosophy. The Milanese school has attacked vigorously both these questions, and Professor Gemelli outlines the position which the New Scholasticism takes with reference to the claims of science, and in particular, of biology and psychology, and how the New